

MAC OS X 10.6 SPECIAL ISSUE

Macworld

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**16-Page OS X
Insider's Guide**

Snow Leopard

- **In-Depth Review**
- **How to Make
the Upgrade**
- **Top New Features**

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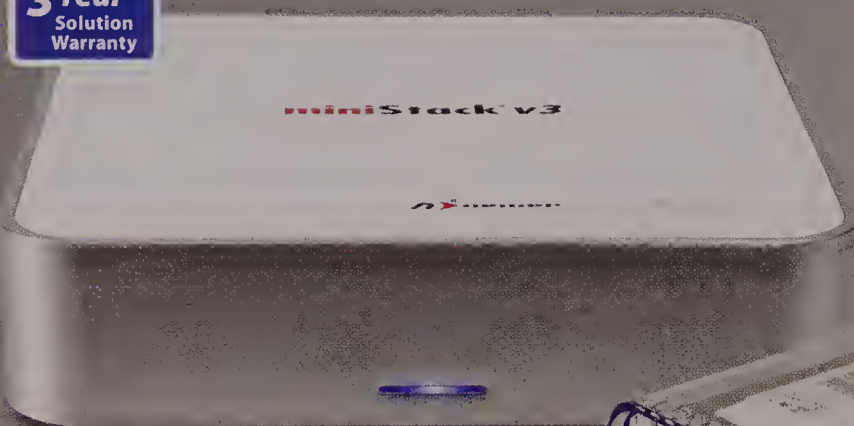
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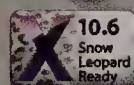
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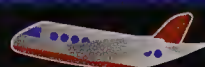
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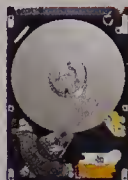
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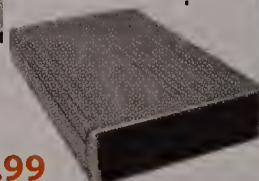


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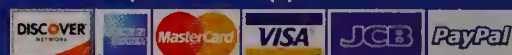


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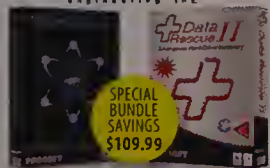
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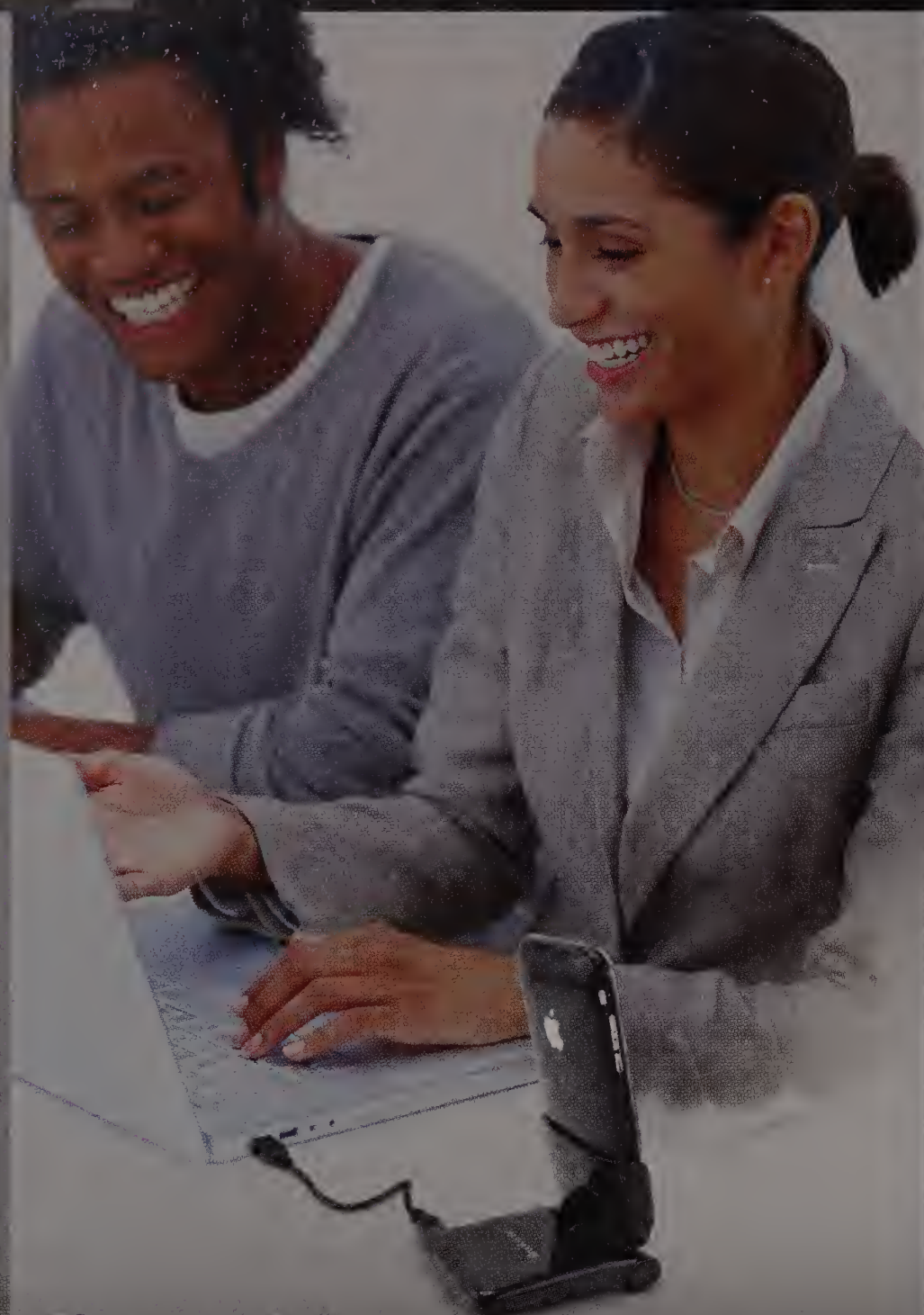


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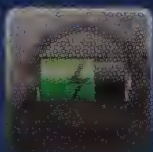
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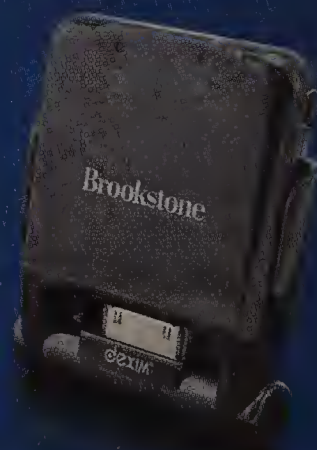
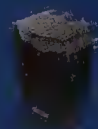
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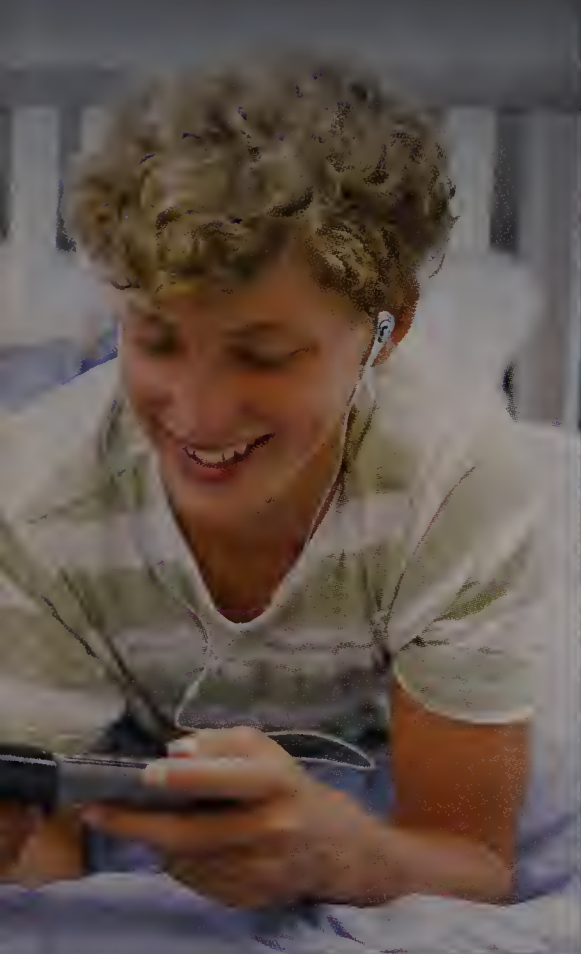
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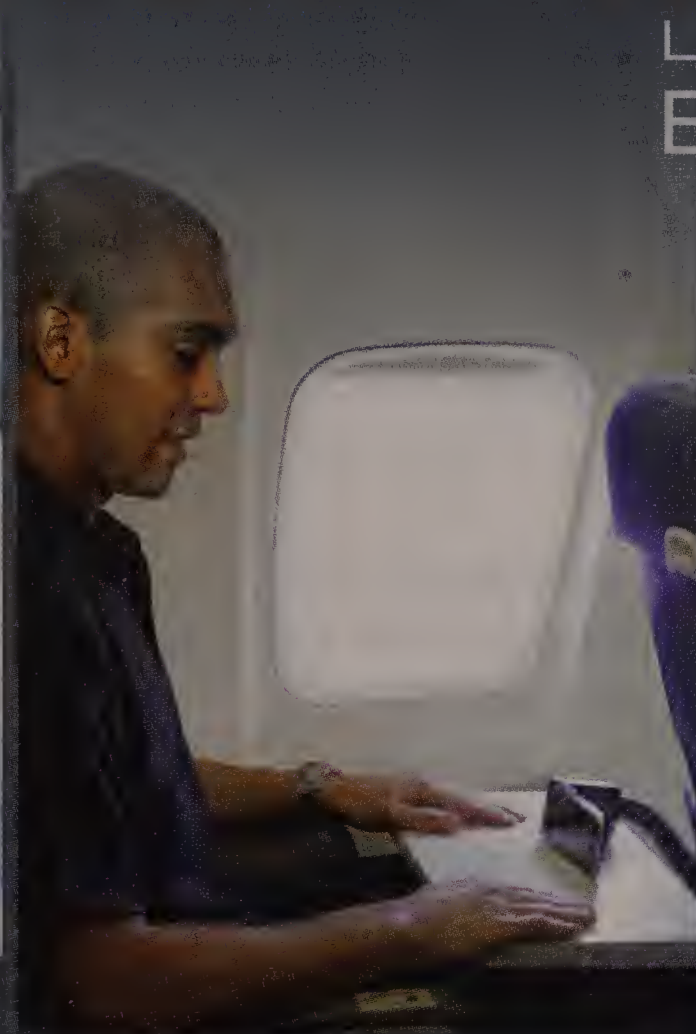
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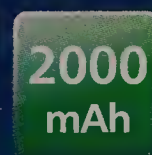


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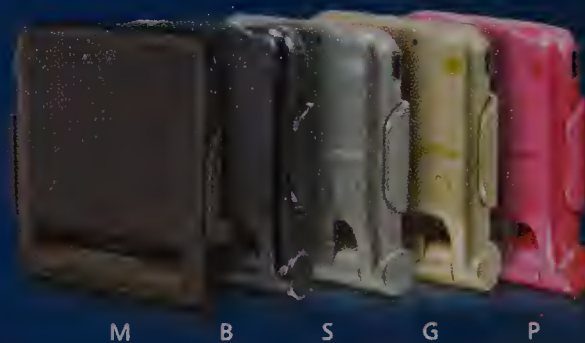


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CONTENTS

November 2009

OPINION

- 9 From the Editor's Desk**
After a decade of frantic OS development, Apple consolidates. Also, we do a little reorganizing ourselves.
- 14 Feedback**
Readers respond.

MAC USER

- 18 Does Snow Leopard Fix Leopard Annoyances?**
We revisit our grievances with Leopard to see if Snow Leopard addresses them.
- 19 Snow Leopard's Funny Math**
Gigabyte or gibibyte? Which is it?
- 20 Gmail Fail: Is the Cloud Reliable?**
How feasible is today's cloud computing?

IPHONE CENTRAL

- 28 Apple: AT&T Didn't Ask Us to Reject Google Voice**
Apple continues to "study" the Google Voice app and notes its concern that the app "appears to alter the iPhone's distinctive user experience."
- 29 Is AT&T's 3G Service Getting Better?**
The wireless service provider is updating its 3G band.
- 29 Apps with Maps: iPhone Car Navigation**
The iPhone 3.0 software update enabled iPhone apps to finally support turn-by-turn navigation.

WORKING MAC

- 62 Favorite Office Tips**
Get more out of Microsoft Office with these five useful tricks for PowerPoint, four helpful hints for Excel, and two practical pointers for Word.
- 63 Next Mac Office Due Late 2010**
An update to Microsoft Office for the Mac will include Outlook.

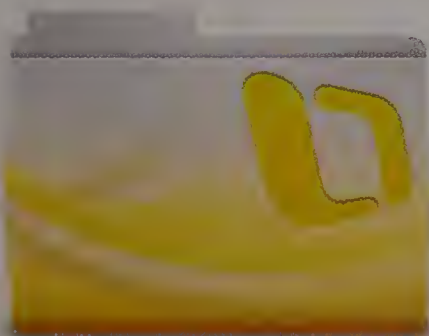
Mac OS X Snow Leopard

Mac OS X Snow Leopard

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Does Snow Leopard Fix Leopard Annoyances? **18**



63



28



On the Cover
Image by Splashlight

COVERSTORY

- 32** **Let It Snow!**
Everything you need to know about Mac OS X 10.6, aka Snow Leopard, is in our 16-page guide.

FEATURE

- 55** **Online Backup Services**
Want to add an online backup service to your overall backup strategy? We rate seven Mac-specific services.

PLAYLIST

- 72** **Apple Updates iPod Lineup**
We have all the news about Apple's recent update to its music-player lineup.
- 73** **iTunes 9 Debuts**
New features and improvements await you in the latest update to Apple's jukebox software.

DIGITAL PHOTO

- 78** **Recover from Digital Photo Disasters**
Protect your pictures from loss or accidental erasure. We show you how.
- 80** **Snapshot: High-Speed Photography**
Our *Snapshot* series takes you behind the scenes of a great photo.

CREATE

- 82** **Logic Studio versus GarageBand**
Are you a musician who needs a more-powerful tool than GarageBand? See what Logic Studio has to offer.
- 83** **Recording a Song on an iPhone**
Compose and record a song on your iPhone, and export the audio to your Mac for editing.

HELP DESK

- 86** **Mac OS X Hints**
Sequentially name copied files, rename open files, get Safari's debug menu back, and more.
- 88** **Mac 911**
Disable Safari 4's image cache, put spare hard drives to work, catalog Mail messages by date, and more.

BACK PAGE

- 100** **Hot Stuff**
Check out the cool stuff we're into right now.



32 Let It Snow!



55
Online Backup Services

MACWORLD.COM'S TOP 5

The top 5 stories on Macworld.com are:

- 1** **Snow Leopard's Smaller Changes**
Our Snow Leopard slideshow highlights a few refinements you may not have noticed (macworld.com/5250).
- 2** **Review: Snow Leopard**
Jason Snell finds that Mac OS X 10.6 adds Exchange support and a host of tweaks (macworld.com/5251).
- 3** **Fall's Most Promising Cameras**
This *PC World* slideshow showcases the fall's most exciting camera announcements (macworld.com/5252).
- 4** **Snow Leopard: What's Gone Where**
Rob Griffiths tracks down items that are on the move in Mac OS X 10.6 (macworld.com/5253).
- 5** **11 Major New Snow Leopard Features**
We give you a rundown of the most important changes you'll find in Apple's latest operating system (macworld.com/5254).

(Ranking valid as of September 10, 2009.)

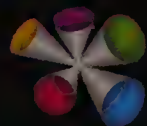


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The Snow Leopard Pause

After years of continuously adding new features to OS X, Apple consolidates

Thanks to dozens of feature tweaks and a low, low price, Snow Leopard is possibly the biggest no-brainer upgrade in the seven-year history of OS X. You can read our avalanche of Snow Leopard coverage beginning on page 32. But before you do, pause a moment to consider how far Apple has come in the last decade.

What a Difference a Decade Makes

By the end of the 1990s, Apple was desperate. The classic Mac OS was ten years old and showing its age. The company was foundering financially and producing uninspired hardware. Apple saw the need to move to a modern operating system. Salvation came with the purchase of Next, whose NextStep operating system became the foundation of Mac OS X.

The initial mashup of the Mac and NextStep wasn't pretty. But by September 2001, with the release of OS X 10.1, Mac OS X was suitable for general use. (You can read my original review of it at macworld.com/5280.) And OS X developed rapidly from there.

While it's a nice upgrade for most Mac users, Snow Leopard marks a brief pause in the development process. After a decade's work, it made sense for Apple to focus on cleaning up bugs and fine-tuning performance.



After a decade, it made sense for Apple to focus on cleaning up bugs and fine-tuning performance.

But now that Snow Leopard is out, I suspect that Apple's OS X developers are once again considering major improvements to the operating system. I wouldn't be surprised if Mac OS X 10.7—whatever cat it's named for—turns out to be the most radical update yet. In the meantime, Snow Leopard is a welcome change in a familiar friend—one we didn't even know a decade ago.

Making Changes

The magazine in your hands right now looks different from the one you received last month. We've reorganized our back-of-the-book sections—*Working Mac*, *Digital Photo*, *Playlist*, and *Create*—and added reviews and news to complement the how-to stories they've always had. And we've split our *MacUser* section, which previously was our catchall for news, in two: a section for general Mac news and opinion (still called *MacUser*), and a section for all things related to the iPhone and the iPod touch (called *iPhone Central*). Instead of a *Reviews* section, you'll find relevant reviews in all the individual sections of the magazine.

This new organization will help us make the magazine more timely and more focused on the topics you want to read about. For example, you'll now find photography news, camera reviews, and photo tips and tricks all in one place—in *Digital Photo*. All you fans of the iPhone can find app reviews and news in *iPhone Central*; those of you who haven't yet succumbed to the device's charms can skip straight to the stuff you *do* care about.

You'll still find our longer feature stories, along with regular roundup reviews, in the middle of the magazine. And in the back, *Help Desk*—our most popular section—remains the same.

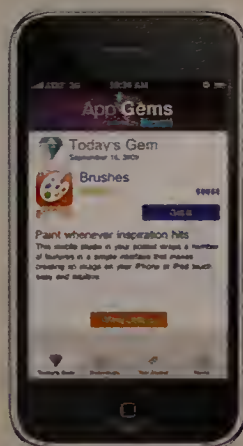
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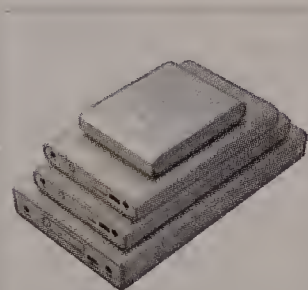


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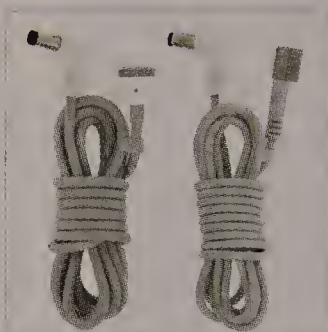
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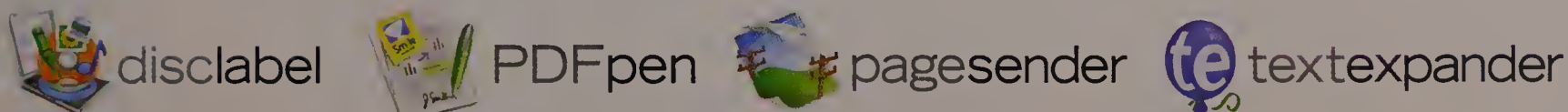


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Reader Tips Galore

We highlight your backup tips, favorite Mac programs, and ideas on customizing OS X

Better Backups

You gave an excellent overview of the various backup options based on a person's level of worry ("The No-Worry Backup Plan," *Working Mac*, August 2009). One other option for the "obsessive" category (into which I fall) is to keep backup drives in a fireproof, waterproof safe near your computer. This way, you can make frequent backups to protect your information from disasters, such as a fire or flood, and you can easily access your data. I agree that keeping at least one backup off-site or online makes sense, but as you mentioned, off-site backups are not easily accessible, and online backups are limited in size.

 **Terry Plowman**

I rely on Time Machine and the Time Capsule to store a full backup. I exclude only the Cache and Junk folders. This way, I can have a full restore on the same or a new machine. However, Time Machine has a major drawback—if you get a new motherboard or buy a new computer, you're no longer able to access all your backups unless you use the full-restore feature. If you know your way around Unix, there are other ways to get to your backups, but I wish Apple would fix this problem for the average consumer.

 **krikri**

I don't think there's hope of an internal RAID, but small, portable external RAID 1 devices are starting to crop up. The

G-RAID mini2, by G-Tech, is an example. Small RAID's have been around for a while, but nearly all were fixed as RAID 0 drives. I've recently seen RAID 1 appear only in a portable drive. The Oxford 936 chipset seems to be paving the way.


 **high**

Good article. However, all these schemes assume that all your backup data fits onto a single volume. When it doesn't, things get much more complicated. I have over 2TB of data and have to juggle multiple backup drives. Time Machine can't back up to multiple destination volumes; cloning becomes more complicated; and online backups are out of the question (except for select, critical files). Another problem is that I

have a single file that is about to exceed 1TB in size. Most backup solutions aren't able to split up large files between multiple destination volumes, which limits my backup options. I'd love to see a backup program that seamlessly handles very large files, splitting them across backup volumes if necessary.

 **OkeiAwjr**

I can set up an expensive RAID system, but it's difficult to take one off-site. What I would like is a backup and archiving program that keeps track of multiple source and destination drives for me (so I don't have to manually keep track of what's where); that way, I could be sure everything was backed up somewhere.

 **mssharp**



READERS' FAVORITE GEMS

In our August 2009 issue, we shared some of our favorite Gems. Here, readers add their own picks to the list:

ck4jc recommends:

Bean: A quick word processor; free; www.bean-osx.com



SteerMouse: Adds mouse functionality and speed; \$20; plentycom.jp/en/steermouse

MP3 Trimmer: Splits and combines MP3s; \$11; deepniner.net/mp3trimmer

Jaddie recommends:



DragThing: Quick-launch utility; \$29; dragthing.com

macFanDave recommends:



GraphicConverter: Photo editor; \$35; www.lemkesoft.com

stephen520 recommends:

Hazel: Folder organizer; \$22; www.noodlesoft.com/hazel.php



Dropbox: Sync files between your computers; free; www.getdropbox.com

Evernote: Note-capturing and organizing tool; free; evernote.com

Berend recommends:



HoudahSpot: File-search tool; \$25; www.houdah.com

FastScripts: Apple Script Menu replacement; \$15; www.red-sweater.com

Namely: Application launcher; free; amarsagoo.info/namely

whitedog recommends:



Jolt: Lets you control Energy Saver; \$5; driftinglight.com

PopChar X: Character finder; €30; macility.com/products/popcharx

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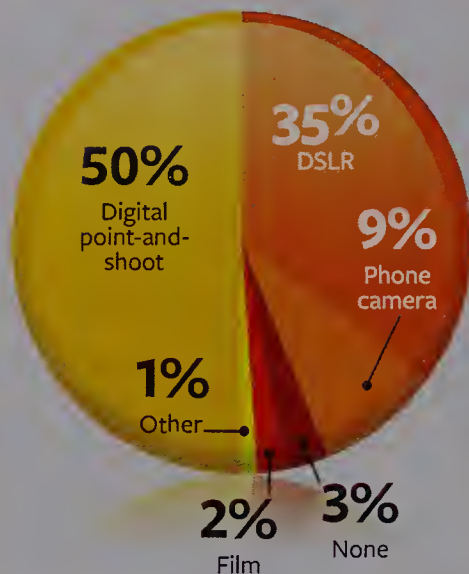
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READER POLL

What type of camera do you use the most?



Source: Macworld.com online poll, September 2009

Even though I have a Time Capsule, I use an external FireWire disk with Time Machine: I found that backing up

wirelessly with Time Machine was too slow, and it meant that Time Machine ran more or less constantly in the background. I do use my Time Capsule to make regular backups with Apple's Backup software. It makes incremental backups once a day, which takes only about ten minutes. I also manually back up everything to yet another external hard disk, which I keep in my car. And about once a year I make a complete DVD archive of my data, which I have squirreled away in the attic. I don't consider this obsessive, it's just taking the logical precautions for protecting one's most critical possession—one's data.

spinozaz

Customizing Macs

While I love customization ("Your Mac, Your Way," August 2009), I'm very careful not to do anything that replaces OS X's built-in functionality or appearance. We choose to use Macs because they promise a certain logical connection between the

operating system and the applications. I'm a big believer in allowing the OS to guide my organization and workflow, or at least giving it a try until I find specific things that I need to change to better reflect my own logic. Even then I try to enhance or add to the existing framework, rather than replace it.

robogobo

My wife and daughter share my Mac, so I set up each user's desktop and Dock with an alias to that person's Home folder. Then I deactivated the options to view hard-drive icons on the desktop and in the Sidebar in Finder windows. This way,

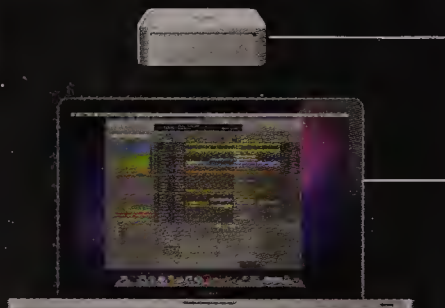
Correction

Our September 2009 review of Birdhouse incorrectly stated this iPhone app's features. Using Birdhouse, you can compose, edit, and post tweets to Twitter.

digital signage for the Mac



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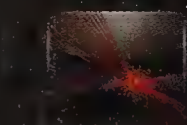


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Dock precisely because it mixes *launching* and *switching*. With a modern OS, it's not as important anymore to carefully manage launched applications. I leave Mail, Safari, and Adium running for days or weeks, without feeling the same pressure to quit them that Windows imposes.

☞ Rhywun

in any unsecured text editor. And because I've selected Show Status In Menu Bar in my Keychain Access preferences, they're always within easy reach. For added security, I set Access Control for each note to Confirm Before Allowing Access. I never select Always Allow when I'm prompted to unlock the note. This way, even when I'm logged in, my secure data is safe from prying eyes.

☞ Kevin Owens

everyone can easily store their files in the right places. I added the most commonly used apps to the Dock, as well as a folder with aliases for other applications.

☞ DrRippStudwell

If you're not using LaunchBar to perform Web searches in addition to launching stuff, you're really missing out. It's exactly like using keywords in Firefox, only Firefox doesn't have to be visible or even running. Also, I love the

Password Safety

You write that Keychain isn't as effective for storing nonpassword types of data ("Top Password Tips," *Working Mac*, September 2009). Not true. I store credit card, registration, and identification numbers—plus passwords—in Keychain. In the Secure Notes category of my login keychains, I have a secure note for each category. Within each note I add, in alphabetical order, my various corresponding numbers just as I would

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Mac OS X Snow Leopard

Mac OS X Snow Leopard

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DOES SNOW LEOPARD FIX LEOPARD ANNOYANCES?

Unfortunately, not always. It even adds some new ones.

By Rob Griffiths

Leopard was a fine operating system, but there were always things about it that I found annoying. (To see my bottom-ten list, with full descriptions, see macworld.com/4270.) When Snow Leopard shipped, one of the first things I did was check to see whether those annoyances were still there. Unfortunately, many of them were. And I found a couple of new ones while I was at it.

10. Custom Colors in Finder Labels You still can't customize the Finder's label colors in Snow Leopard.

9. Blue-Gray Folder Icons Still there, still blue-gray, and still hard to tell apart.

8. Bluetooth Support in Address Book OS X 10.4 supported Bluetooth SMS sending and phone dialing (for non-iPhones) in Address Book; it vanished in 10.5, and it's still missing in 10.6.

7. Aliases in Docked Folders In OS X 10.4, if I put a folder alias inside a folder on the Dock, I could drill down into the folder to which that alias pointed from inside that docked folder. This feature broke in 10.5, and it's still broken in 10.6.

6. Mail's Odd Feature Creep Mail hasn't gained any major features in 10.6, thankfully. However, there's still no way to disable features I don't want to use, such as Notes and To Dos.

5. Floating Help Viewer In Leopard, when you opened a Help window, it floated over—and covered up—other open windows. That's fine on a 30-inch LCD, but it's not so fine on a 13-inch MacBook. It's still floating over everything in Snow Leopard.

4. Time Machine User Interface Snow Leopard adds a percentage completion figure that charts the progress of the backup process. That's nice, but it'd be even nicer to have more information and more control than that.

3. Finder Sidebar In Leopard, if you hid the sidebar you also hid the toolbar. In Snow Leopard, that's been fixed—sort of. You can now select View ► Hide Sidebar (⌘-Option-S) to hide the sidebar while leaving the toolbar visible. But if you use View ► Hide Toolbar (⌘-Option-T), you *also* lose the sidebar. So you can have an invisible sidebar and a visible toolbar, but not vice versa.

The sidebar is still broken in other ways, too. You can't set the font size, you can't rearrange the groups, you can't scroll through its entries with the keyboard, and you can't select it with the keyboard.

2. Editing Events in iCal Editing events in Leopard's iCal was painful: You had to double-click on the event and then click the Edit button (or select an event and press ⌘-E). In Snow Leopard, there are *two* new ways of editing events (in addition to the methods that worked in 10.5).

First, you can visit iCal's Preferences, click the Advanced tab, and select Open Events In Separate Windows. Then, when you double-click an event, it will come up in a new window, ready for editing.

Or you can select Edit ► Show Inspector, and a floating window appears, much like the Inspector window in the Finder. When you then select (one click) any event, its information will appear in the floating Inspector window; you can then click any field to edit it. Unfortunately, you can't activate one of those fields from the

keyboard. So, once again, I'm forced to reach for the mouse to begin editing. (Once you've selected a piece of data, you can navigate with the keyboard.)

1. Columns in Spotlight Results Apple's list of Snow Leopard refinements (macworld.com/5276) promised that the new OS would include "customizable Spotlight search options." I thought that meant the return of 10.4's ability to specify the columns, including Size, that would appear in the Finder's Spotlight search results. Unfortunately, that's not the case.

Yes, there are customizable columns in Spotlight's search results—but only Date Modified and Date Created (press \mathbb{H} -J after running a search to see the options). Size, Version, Comments, and Label are grayed out and not selectable.

Given that, I'll still rely on Houdah-Spot (macworld.com/3516) for my Spotlight searches, because it works with Size (and tons of other fields the Finder doesn't support). I really don't understand how something so basic, which worked fine in OS X 10.4, can remain broken nearly three years into the Leopard and Snow Leopard era.

So of my ten original gripes, it appears that six haven't been addressed at all; three (numbers 1, 3, and 4) have had minor fixes; and one (number 2) has been almost fully fixed by Snow Leopard. That's not great, but at least there has been some progress.

The New Glitches

While there are undoubtedly many new annoyances in Snow Leopard (see our wiki page at macworld.com/5275 for a list), two in particular are quite grating.

First: If you use a four-finger swipe (up or down) on a Multi-Touch trackpad and then reverse the swipe *without first lifting your hand from the trackpad*, the action will *repeat* itself when you lift your fingers from the trackpad.

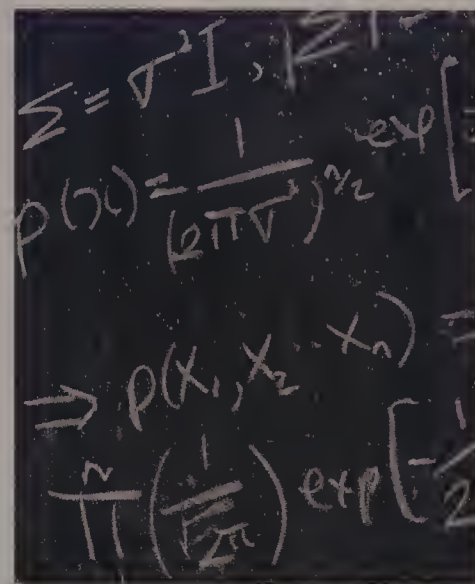
Let's say you use a four-finger swipe up to reveal the desktop, then swipe down again without lifting your hand. When you swipe up, open windows will slide off the screen, revealing the desktop, just as you want. When you swipe down (without lifting your fingers), those windows will slide back to their starting positions. But if you then remove your hand from the trackpad, the windows again slide off the screen, as they did after your first swipe.

The fix: you need to repeat the original swipe (up, in this example), and then remove your hand from the trackpad. That will leave the windows where they belong. This happens only with four-finger swipes, not with all Multi-Touch gestures.

My second gripe has to do with Snow Leopard's revamped Services menu (see "Services That Make Sense [Finally!]" on page 44). According to Apple, services should be available from contextual menus, as well as from the traditional Services menu.

However, that's not always the case. Sometimes they appear on contextual menus, sometimes they don't. Until Apple decides whether services should be on contextual menus, I'd recommend that you use the Services menu—and assign keyboard shortcuts to the services you use most.

I'm sure there are plenty of other new glitches out there. As you spend time with Snow Leopard, feel free to add any you discover (along with workarounds) to our wiki page.



Snow Leopard's Funny Math

By Jason Snell

To computer-science types, a kilobyte is actually 1024 bytes. That's because computers like to count in exponents of 2 (2, 4, 8, 16, 32, 64, 128, 256, 512, 1024, and so on). That's why the iPhone comes in 16GB and 32GB models, why the original Mac came with 128KB of RAM, and why what we call a gigabyte has historically meant 1024 megabytes.

But to a second group—let's call them "regular people"—a gigabyte should be 1000 megabytes, not 1024.

These two ways of counting can be confusing. It's why, for example, when you do a Get Info on your "250GB" hard drive in the Finder, OS X would say it had a capacity of 238GB.

There are now, in fact, different terms for these different ways of counting. A *gigabyte* (GB) is officially defined as 1000 bytes cubed, or 1,000,000,000 bytes. A *gibibyte* (GiB) is 1024 bytes cubed, or 1,073,741,824 bytes. The same goes for *megabyte* (MB) and *mebibyte* (MiB).

In Snow Leopard, Apple has switched the way it counts. Instead of defining a gigabyte as 1024 cubed, it's using 1000 cubed. A file measuring 252,916,507 bytes appeared as 241.2MB in Leopard, but it's 252.9MB in Snow Leopard. The number of bytes hasn't changed, but the meaning of megabytes has.



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For professional-quality sound, record in a quiet location that does not produce an echo. Avoid reflective or hard surfaces such as windows or concrete walls. Avoid air conditioning units, and most of all, people!

Stop the Pop

Popping, or plosives, are explosive breaths that are heard after words that begin with a "p," "t," "d," or "b" sound. Windscreens and pop filters provide an acoustically transparent shield around your microphone.

Maintain a Consistent Sound Level

Movement will change recording levels. Record any instruments separately from vocals.

Use Effects

Digital audio effects can make both voices and instruments more pleasant to listen to. Effects processing, equalization and compression are most commonly included as unique controls within a single software package or digital mixing console.

Listen Carefully

Monitor the sound while you are recording or editing so you are aware of vocal issues early on.



MAC USER



BRITS ANGRY AT SNOW LEOPARD PRICING

Some British Mac fans are taking umbrage at the cost of Snow Leopard in the UK.

The retail price for Snow Leopard here in the Colonies is \$29. At press time, the exchange rate makes that a little less than £18. Figure in a 15 percent value-added tax, and that goes up to £21. But the single-user retail version of Snow Leopard in the UK is actually £25—£4 more than our back-of-the-envelope exchange, or about \$6.50 American, a 22 percent markup.

As you might expect, some users on *Macworld UK's* Website were not thrilled about that (macworld.com/5277). As one user wrote: "Why does the UK Mac customer always get ripped off by Apple? I know that £25 is cheap for an operating system (albeit a minor upgrade) but you can't help but be annoyed." Apparently many people had expected Apple UK to price Snow Leopard at under £20.

But Apple is not alone in pricing items higher in the UK than in the United States. The Windows 7 Family Pack, available for \$150 in the United States, is priced at £150 (\$245) in the UK—a mind-boggling 63 percent difference.—JASON SNELL

Gmail Fail: Is the Cloud Reliable?

Google's Gmail service recently went down for almost two hours (see macworld.com/5278 for details). Google said that overloaded servers caused the outage—the same excuse it gave in May after a similar interruption.

When applications and data reside on servers around the Net, as Google's Gmail data does, this is called *cloud computing*. Some pundits say that in the future, this will be how we'll store most of our apps and data. Many tech companies are betting on it. Google's Chrome operating system will rely heavily on Web access and Web-based


applications, as will Microsoft Office 2010's online edition. Microsoft is also working on its own Web OS, Midori.

The Gmail outage was more than a temporary inconvenience—it cast fresh

doubts on the reliability of cloud computing. How feasible is this technology, if it means we could lose access to

our apps and files just as Gmail users lost access to their e-mail? Maybe one day you won't need to store every photo, video, or document on your Mac. But you'll still need offline storage to back up vital data, even if it's also in the cloud.—IAN PAUL





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MOST RELIABLE COMPUTERS: APPLE, ASUS

By Agam Shah

Asus and Apple were the most reliable PC vendors in the United States during the second quarter of this year, according to a recent survey. Lenovo, Toshiba, and Hewlett-Packard held the third, fourth, and fifth spots, respectively.

Those ratings were based on 11,560 support calls fielded during that period by Rescuecom, a third-party computer repair firm. It says that it fielded the fewest support calls—adjusted for market share—for Asus and Apple PCs. Rescuecom CEO David Milman ascribes those results to the fact that the companies use high-quality components and provide excellent support, reducing the need for third-party help.

“With the introduction of their Genius [Bar] in retail stores, [Apple is] offering support that many other manufacturers aren’t,” Milman says. Apple’s profit margins on Mac desktops and laptops are much wider than its competitors’, he says, so it can afford to offer that support for free. He notes that Apple has certified many Rescuecom technicians to repair Mac computers.

Asus is relatively new to the study and is reaping the benefit of the recent craze for products such as netbooks in the United States, Milman says; many users are buying the company’s Eee PC netbooks. The company’s reliability ratings could change as the components in those low-end PCs begin to break down. “Their quality has held up from the last study,” Milman notes, “but it will be interesting [to see the outcome] in two years, once the machines age a little bit.”


Rescuecom received more support calls for Dell and HP PCs, which (according to IDC) were the top two PC vendors in the United States in the second quarter of 2009. Dell rated seventh in Rescuecom’s study, with 22.1 percent of the repair calls. Though HP

and Dell held close market shares in PC shipments, Rescuecom received 18 percent more support calls for Dell PCs than for HP ones.

The Rescuecom study was released the same day that the University of Michigan and other organizations issued the American Consumer Satisfaction Index, which measures user satisfaction with products such as cars and PCs. Apple topped that survey with a score of 85, followed by Dell at 75 and a three-way tie between Hewlett-Packard, HP’s Compaq brand, and Acer/Gateway, all of which scored 74.



Macs: Current Lineup

PRODUCT	SPECS	RATING	PRICE	DISPLAY	SPEED-MARKS ^A	FIND CODE ^B
DESKTOP						
iMac 	Intel Core 2 Duo/2.66GHz	★★★★½	\$1199	20 inches	256	4482
	Intel Core 2 Duo/2.66GHz	★★★★	\$1499	24 inches	270	4483
	Intel Core 2 Duo/2.93GHz	★★★★	\$1799	24 inches	297	4484
	Intel Core 2 Duo/3.06GHz	★★★★	\$2199	24 inches	308	4485
Mac Mini 	Intel Core 2 Duo/2GHz (120GB hard drive)	★★★★	\$599	not included	189	4486
	Intel Core 2 Duo/2GHz (320GB hard drive)	★★★★½	\$799	not included	202	4487
Mac Pro 	Intel Xeon/quad-core 2.66GHz	★★★★½	\$2499	not included	348	4488
	Intel Xeon/two quad-core 2.26GHz	★★★★	\$3299	not included	343	4503
PORTABLE						
MacBook 	Intel Core 2 Duo/2.13GHz (white)	★★★★½	\$999	13 inches	198	4946
MacBook Air 	Intel Core 2 Duo/1.86GHz	★★★★½	\$1499	13 inches	156	4953
	Intel Core 2 Duo/2.13GHz	★★★★½	\$1799	13 inches	175	4954
MacBook Pro 	Intel Core 2 Duo/2.26GHz	★★★★½	\$1199	13 inches	213	4947
	Intel Core 2 Duo/2.53GHz	★★★★½	\$1499	13 inches	239	4948
	Intel Core 2 Duo/2.53GHz	★★★★	\$1699	15 inches	237	4949
	Intel Core 2 Duo/2.66GHz	★★★★	\$1999	15 inches	242	4950
	Intel Core 2 Duo/2.8GHz	★★★★	\$2299	15 inches	260	4951
	Intel Core 2 Duo/2.8GHz	★★★★	\$2499	17 inches	256	4952

^A Speedmark 5 is Macworld Lab’s standard test tool for benchmarking systems running Mac OS X 10.5 (Leopard). For more information on Speedmark testing, go to www.macworld.com/speedmark.com. ^B In a browser’s address field, typing a find code after macworld.com/ takes you to a product’s review or overview.

PARALLELS MAKES SWITCHING EASIER

By Jason Snell

Striving to provide an all-in-one-retail-box solution for Windows users who want to switch to the Mac, Parallels recently released a new version of its Parallels Desktop software that comes with a USB transfer cable and in-depth interactive tutorials to aid in the platform move.

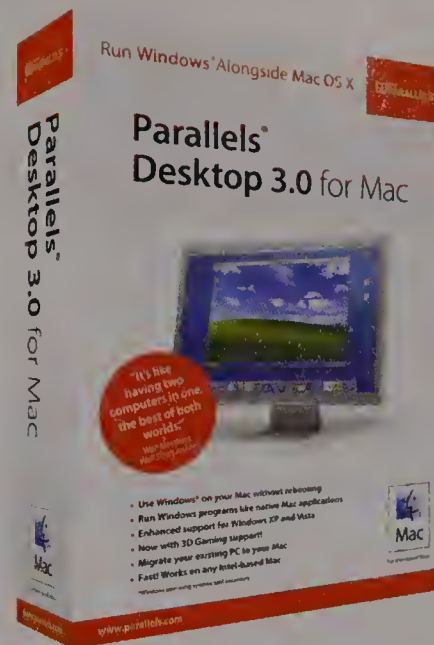
The new \$100 Parallels Desktop Switch to Mac Edition, which is available in Apple retail stores, will enable PC users to transfer the entire contents of their PC (including the operating system) into a virtual machine running on a Mac using Parallels Desktop 4.0 (🍌🍌🍌¹; macworld.com/4299)—creating a duplicate of the system to which they're accustomed.

For several years, Apple has reported

that roughly half of the Macs it sells in its retail stores go to users who have never bought a Mac before. Parallels developed the Switch to Mac Edition to ease that transition for such users.

The installation disc in the box includes the full \$80 version of Parallels Desktop, as well as a Windows-based transfer application to help copy all the user's files over to the Mac. Parallels estimates that it can take roughly an hour to move 35GB of data from one machine to another, depending on the performance of the host machine and the system you're transferring.

The box also includes video training materials designed to teach new Mac



users about the Mac and how to use Parallels Desktop to run Windows on it. Those training materials are more than just standard video lessons: they include a fully clickable mockup of the Mac interface to explore and learn. Users can get a head start on learning the new system while the transfer is still in progress.

The Parallels Desktop 4.0 Switch to Mac Edition supports English, German, and French.

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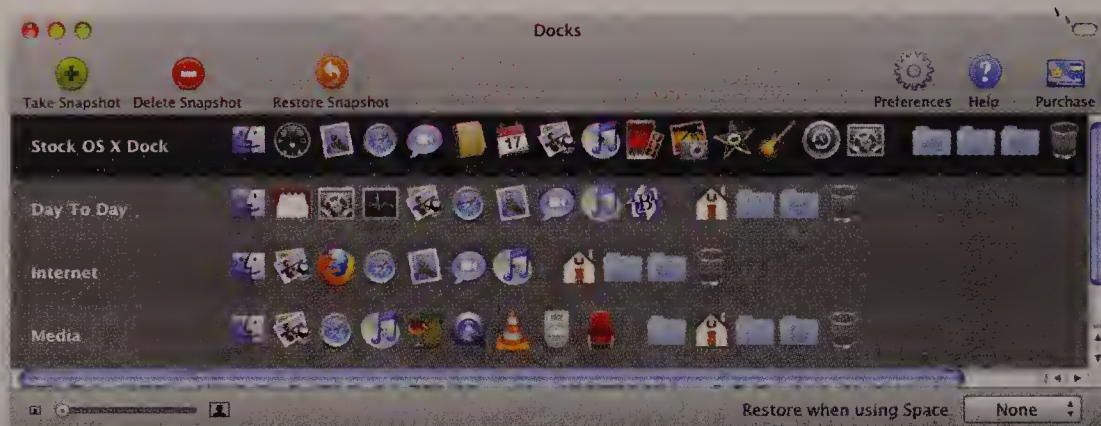
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Docks 2.0.2

UTILITIES One Mac OS X feature request that's been around as long as the OS itself is the capability to have multiple Dock configurations. For example, as a tech writer, I often need to take screenshots, and I want them to include OS X's stock Dock rather than my own highly customized version. Or you may want different Dock configurations for different groups of tasks.

Thoughtful Tree Software's aptly named Docks provides just such a feature in an easy-to-use package with a clear, attractive interface. The first time you launch Docks, you take a snapshot of your current Dock and give it a name. Next you customize the Dock for another task—for example, Internet activities—and take another snapshot. Repeat as many times as you need different Docks. (Note that these snapshots include only items permanently located in the Dock.)

Docks' main window shows your various Dock snapshots in all their

grandeur. You can use the Docks window to switch between snapshots, but I prefer the menu-bar mode, which gives you a systemwide menu of your snapshots. Choose one to swap it with the current Dock.

You can also assign each Dock configuration to a specific Spaces workspace; when you switch to a new workspace, your Dock is automatically swapped to match. Unfortunately, you can't assign a particular Dock configuration to multiple spaces. To accomplish this task, you must create multiple duplicate Dock configurations and assign each to a different space.

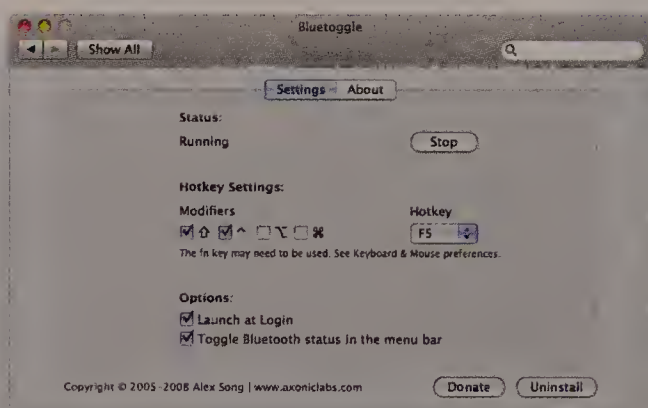
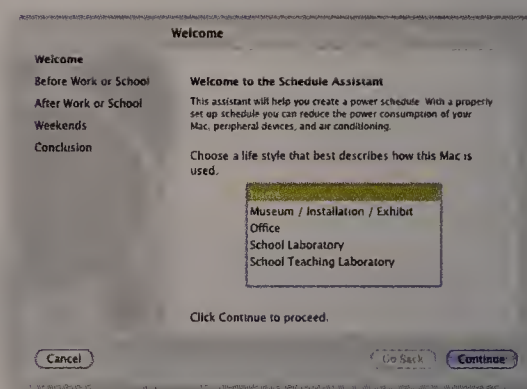
Note that items *minimized* to the Dock aren't saved with snapshots; such items are restored to the screen (maximized) when you switch Docks. Still, if you've ever wanted multiple Docks but found similar utilities confusing or a hassle to use, Docks is worth a look—it gets the interface right.

★★★★; \$15; Thoughtful Tree Software; macworld.com/5269

Power Manager 3.7.2

UTILITIES If OS X's Energy Saver features are too limited for you, Power Manager lets you create multiple, customized schedules that determine exactly when your Mac should be active, along with actions that can occur in response to specific triggers. Actions include start up, wake, sleep, log out, restart, and shut down. Triggers can be a date and time, a daily time, or—for appropriate actions—a chosen period of inactivity. (Power Manager will force sleep, logout, or shutdown even if there are active processes that would normally prevent it.) You can set up schedules manually, or you can use an assistant to create schedules based on when a computer is used—for example, one based on the operating hours of a school computer lab. There's also a systemwide menu for scheduling one-time events to occur after 10, 30, or 60 minutes. (It would be great if there was also a "download finished" option.)

★★★★½; \$29; Dragon Systems Software; macworld.com/5270



Bluetoggle 1.1.0

UTILITIES Although you can toggle Bluetooth on and off using OS X's Bluetooth menu, Bluetoggle lets you assign a keyboard shortcut to this action. Via a new Bluetoggle preference pane, you choose a key from F1 to F12, along with one or more modifiers (Shift, Control, Option, and/or ⌘). Toggling Bluetooth is then as easy as pressing your shortcut; an on-screen display confirms the action. A nice touch: you can choose to toggle the Bluetooth *menu* as well, so it is visible only when Bluetooth is active.

★★★★; payment requested; Axonic Labs; www.macworld.com/5271

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AppleTell

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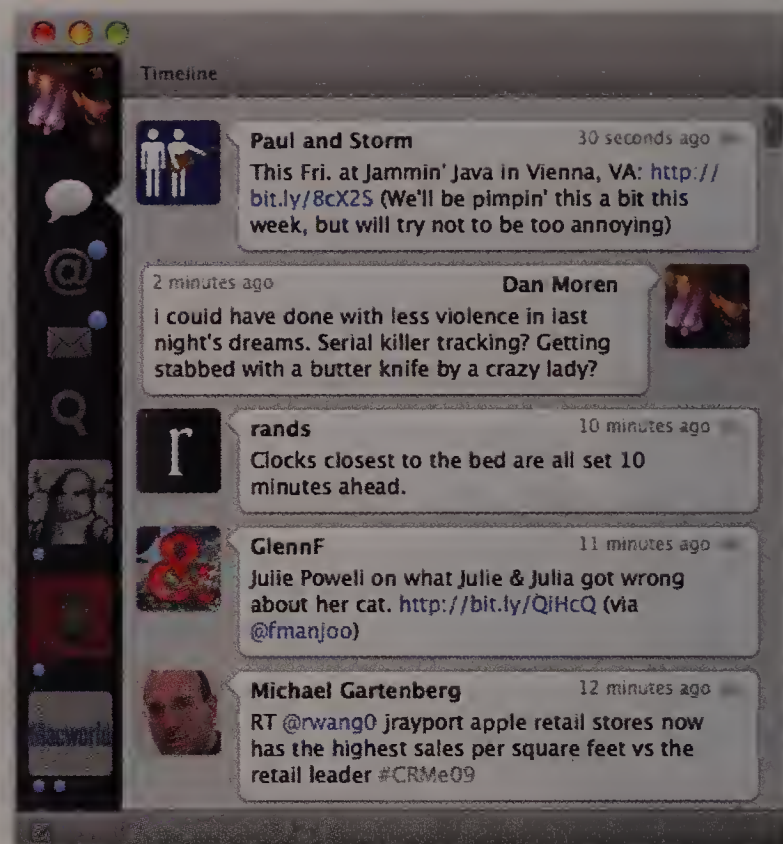
Tweetie 1.2.2

SOCIAL NETWORKING Tweetie, a popular iPhone Twitter client, is now an impressive Mac app. On the left side of the screen is a large avatar for each of your Twitter accounts. Click an avatar to display a set of icons corresponding to tweets from people you follow, mentions (@ replies), and direct messages—there's no need to log in to and out of each account. Click an icon and the chosen view scrolls into place on the right.

Tweetie's other standout features include a conversation view for seeing all messages in a back-and-forth exchange; a built-in image viewer; and an option to preview a shortened URL before visiting it. You can also post a message with a photo or an iSight-captured video by simply dragging and dropping the item into the program's New Tweet window; Tweetie uploads the item to your preferred hosting service and includes the link in your new message.

The program has some odd navigation controls and interface elements, but overall it's an excellent Twitter client, especially for people who manage multiple accounts.—**DAN MOREN**

👤👤👤; ad-free version, \$20; ad-supported version, free; Atebits; macworld.com/5272



Xmenu 1.9

UTILITIES Xmenu lets you add one or more menus to the menu bar for accessing files and data. You can add menus for /Applications, /Developer (if you've installed Apple's developer tools), your Home directory, and your Documents folder, as well as a menu with custom contents and another for Snippets. Click a menu to view a hierarchical list of its contents.

The Snippets menu is for frequently used text, RTF, clipping, and Internet Location files; choose an item to paste its contents into the current text area.

👤👤👤; free; Devon Technologies; macworld.com/5273

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Read Mac Gems online (macworld.com/macgems) for longer reviews of these and other products.



ScreenSharingMenulet 1.7

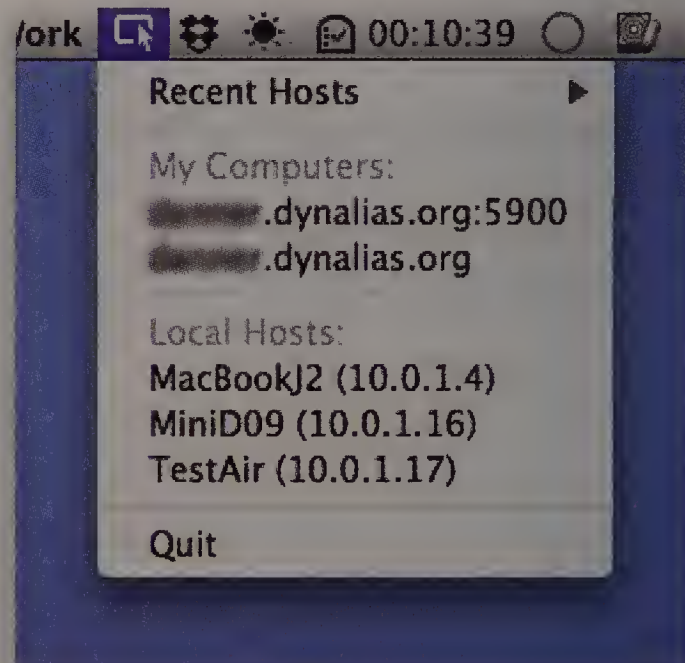
NETWORKING Leopard's Screen Sharing feature lets you view and control the screen of another Mac; it's handy for performing remote tech support for family and friends. But my experience is that many people use it mainly with computers in the same house or office. For example, I frequently use it to peek in on my desktop Mac from my laptop.

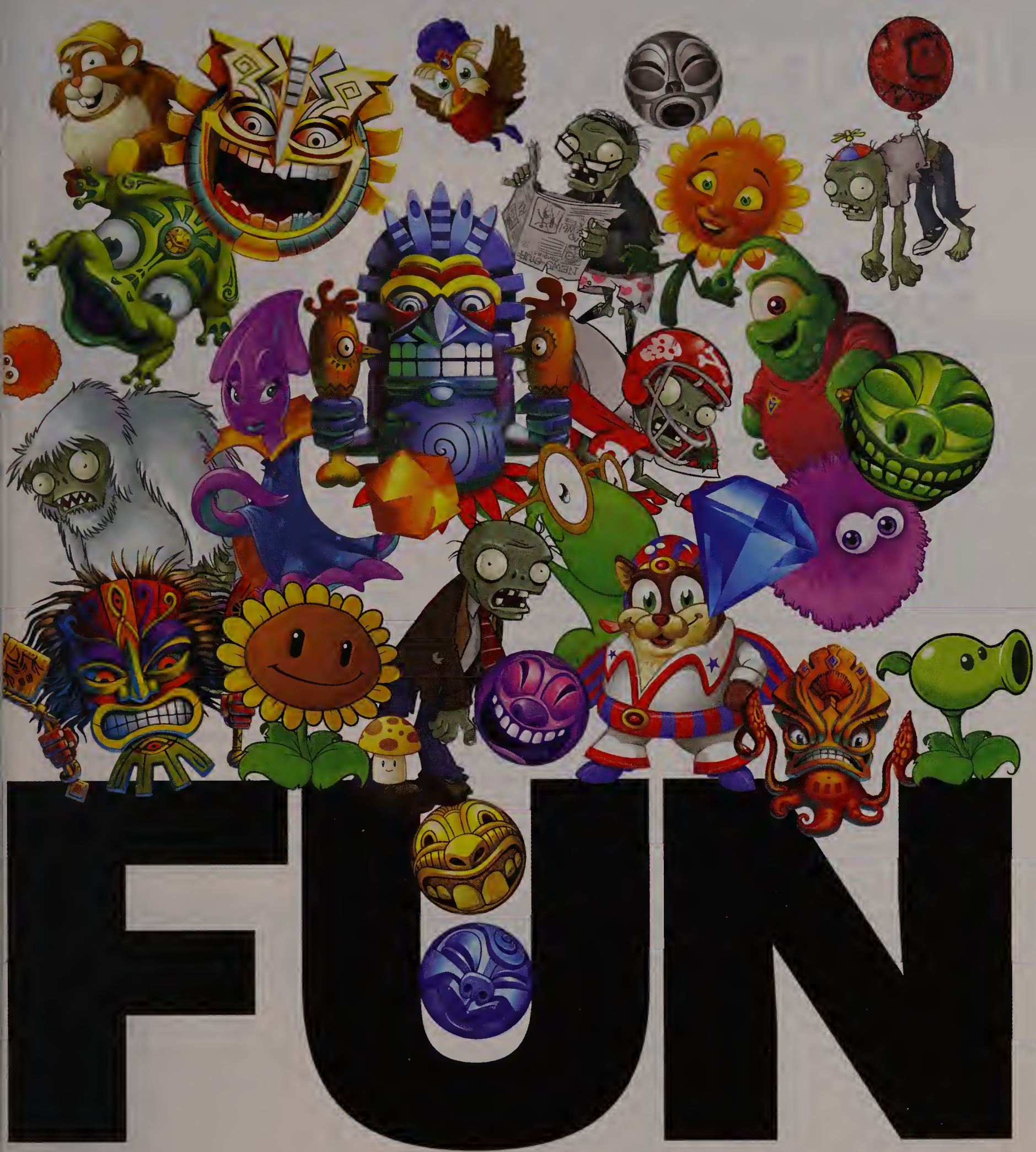
ScreenSharingMenulet aims to make local connections easier by providing a menu-bar menu that lists any computers on your local network with Screen Sharing (or Remote Management—aka Apple Remote Desktop) enabled. Choose a computer from the menu, and the Screen Sharing application initiates a screen-sharing connection. (If you've previously saved the required username and password, the connection will be made immediately; otherwise, you'll need to provide them.)

Thanks to Bonjour, ScreenSharingMenulet's menu updates in real time, showing new Screen Sharing-compatible computers as soon as they appear on the network. The menu also provides a submenu showing computers to which you've recently connected. If you've tweaked the Screen Sharing application to display its hidden browser (see macworld.com/3308), the menu also displays any nonlocal hosts you've connected to before.

One feature that would make ScreenSharingMenulet even more useful would be an option to enter an IP address to connect to a computer over the Internet. But for quick connections on a local network, this simple program is tough to beat.

👤👤👤; payment requested; Stefan Klieme; macworld.com/5274





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APPLE: AT&T DIDN'T ASK US TO REJECT GOOGLE VOICE

Company lifts veil on App Store approval process

By Jason Snell

Responding to questions from the U.S. Federal Communications Commission (macworld.com/5244) about the reported rejection of a Google Voice app from the App Store, Apple recently provided some intriguing details about how its App Store approval process works.

In a Web site posting entitled "Apple Answers the FCC's Questions" (macworld.com/5243), the company explains the App Store process in general and replies to some specific questions from the FCC. Since many of those questions center on the fate of a Google Voice app for the iPhone and the iPod touch, much of the document focuses on that.

According to the posting, Apple—despite media reports to the contrary—has "not rejected the Google Voice application, and continues to study it." But the post also suggests that the company is worried that a Google Voice app would confuse iPhone users, because it "appears to alter the iPhone's distinctive user experience by replacing the iPhone's core mobile telephone functionality." The fact that Google Voice bypasses the phone's own Visual Voicemail and transfers iPhone contacts to Google servers presents "several new issues and questions... that we are still pondering at this time."

The memo clearly declares that AT&T had nothing to do with the nonapproval of Google Voice. "Apple is acting alone and has not consulted with AT&T" on the matter.

That's not to say that AT&T has had nothing to do with other app rejections. Apple's statement indicates that the company is contractually obligated to ban Voice-over-IP phone apps. It also bans apps that would redirect a TV signal to an iPhone—not because its agreement with AT&T bars it, but out of respect for "AT&T's customer Terms of Service." (SlingPlayer Mobile for iPhone [📱]; macworld.com/5255) was barred from the App Store until Sling Media tweaked the product so that it works only over a Wi-Fi connection, and not on

AT&T's 3G network [macworld.com/5256].)

The document offers up several other interesting insights

into the App Store approval process:

- > Most rejections "are based on bugs found in the applications." Approximately 20 percent of apps are submitted more than once before they're accepted.

- > The company has received "about 8,500 new applications and updates" per week, and about 200,000 submissions (both new apps and updates) since the App Store submission process began.

- > There are "more than 40 full-time trained reviewers"; each app is studied by at least two of them.

The Apple document acknowledges that Apple has made some mistakes with the App Store. "We're covering new ground and doing things that had never been done before," it says. "Many of the issues we face are difficult and new, and while we may make occasional mistakes, we try to learn from them and continually improve."

Google



Apple Investigating Malfunctioning iPhones

By Jeremy Kirk

After investigating recent reports from Europe of dangerously malfunctioning iPhones, Apple told the European Commission's Directorate-General for Health and Consumers that "these are isolated incidents and... not a general problem."

An 18-year-old French teenager claimed that his eye was injured when the glass touchscreen on his girlfriend's iPhone shattered. A 47-year-old man from Liverpool reported that his daughter's iPod touch exploded after he dropped it. And in the Netherlands, the owner of an iPhone 3G returned to his car to find that the device had burned a large hole in his vehicle's seat.

Apple's UK office said: "We are aware of these media reports, and we are waiting to receive the iPhones from the customers. Until we have the full details, we don't have anything further to add."

A Seattle TV station recently reported that it had obtained more than 800 pages of documents from the U.S. Consumer Product Safety Commission, detailing 15 incidents in which iPods caused fires or burned their owner. Faulty lithium ion batteries, which can dangerously overheat, are among the suspected causes.

IS AT&T'S 3G SERVICE GETTING BETTER?

By Jared Newman

People who grumble about AT&T's lousy 3G coverage may soon have less reason to complain. That's because the wireless carrier recently began rolling out service in the 850MHz-spectrum 3G band on its nationwide cellular network. Started in Atlanta, that rollout is expected to expand to the 350 other markets where AT&T offers 3G coverage later this year.

Benefits have already been felt in San Francisco, where there have been anecdotal reports of solid service appearing in areas that were previously spotty. AT&T recently told TechCrunch's M.G. Siegler (www.techcrunch.com) that infrastructure improvements are indeed under way in the Bay Area, bringing with them improved service.

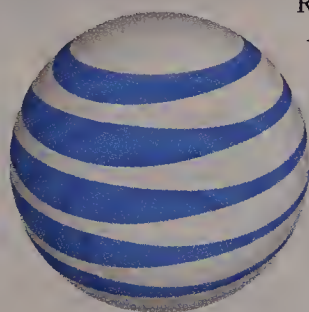
Gripes against AT&T are common, especially among iPhone users. An upgrade to the company's cellular data service before last summer's iPhone 3G release did little to pacify complaints.

A recent survey of iPhone users by

ChangeWave Research found that half of the respondents cited AT&T as the biggest downside to owning the smart-phone. Among those respondents, 23 percent said calling and data coverage was their biggest beef. (Thirty-two percent said they didn't like being locked in with AT&T, a reaction that could involve a number of other issues as well.)

Rolling out the 850MHz spectrum will certainly improve coverage, but there's more work to be done. The company plans to upgrade its HSPA 3G network to effectively double capacity, from 3.6 mbps to 7.2 mbps. When AT&T rolls out the network upgrade later this year, it'll allow iPhone 3GS owners to finally take advantage of the phone's faster hardware (at least for downloads).

Those upgrades will go a long way toward making AT&T seem like it's on the ball. Now, if only it would pony up support for tethering and MMS, and maybe let that SlingPlayer app work over the 3G network, we'd be all set.



Apps with Maps: iPhone Car Navigation

By Jason Snell

With the iPhone 3.0 software update, iPhone apps were enabled to handle turn-by-turn navigation. And now there are three apps on the market that do just that—essentially, they are like stand-alone satellite navigation systems, on your iPhone.

TomTom's series of international iPhone apps (macworld.com/5246), Navigon's MobileNavigator line (macworld.com/5247), and Sygic Mobile Maps (macworld.com/5248) aren't cheap. They range in price from \$50 to \$100 and more. But they can help your iPhone replicate much of the functionality of dedicated, GPS-based navigation units costing much more. I recently took all three for a test drive.

TomTom has a great selection of voices—at least a half-dozen in English, including four in U.S. English (though I admit I enjoyed the European-accented voices provided by Navigon and Sygic). Navigon's display of live logos impressed me—"Look, honey, there's a Taco Bell floating right over there!" Sygic's app feels more like a stand-alone GPS receiver than a native iPhone program; that said, it's really well designed. Bottom line: All three apps have potential, and I know their developers are hard at work adding features users have requested.

Look for our reviews of all three in the near future. Meanwhile, check out our video at macworld.com/5249 to get an idea of how they work.



iPhones: Current Lineup

PRODUCT	SPECS	RATING	PRICE ^A	DISPLAY	PERFORMANCE	FIND CODE ^B
iPhone 3G and 3GS	8GB (3G)	★★★★	\$99	3.5-inch color	5 hours of 3G Internet; 5 hours of 3G talk time	4184
	16GB (3GS)	★★★★½	\$199	3.5-inch color	9 hours of 3G Internet; 5 hours of 3G talk time	4955
	32GB (3GS)	★★★★½	\$299	3.5-inch color	9 hours of 3G Internet; 5 hours of 3G talk time	4956
iPod Touch	8GB	★★★★	\$199	3.5-inch color	36 hours of music playback; 6 hours of video playback	3864
	32GB	★★★★½	\$299	3.5-inch color	36 hours of music playback; 6 hours of video playback	5257
	64GB	★★★★½	\$399	3.5-inch color	36 hours of music playback; 6 hours of video playback	5258

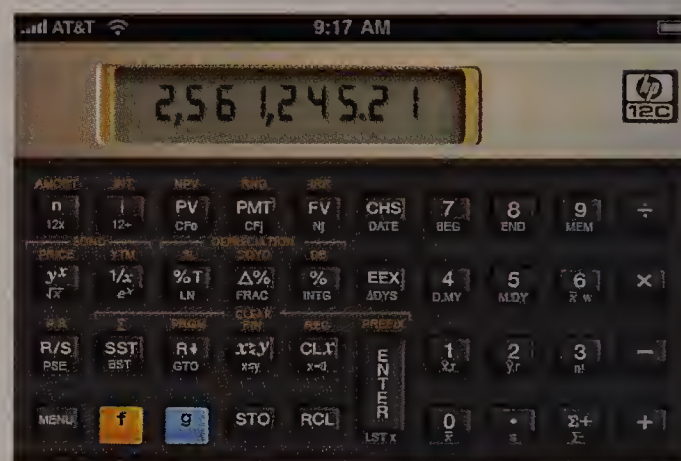
^A All prices are the best current prices taken from a PriceGrabber survey of retailers at press time. ^B In a browser's address field, typing a find code after macworld.com takes you to a product's review or overview.

App Guide

iPhone and iPod Touch software that's caught our eye

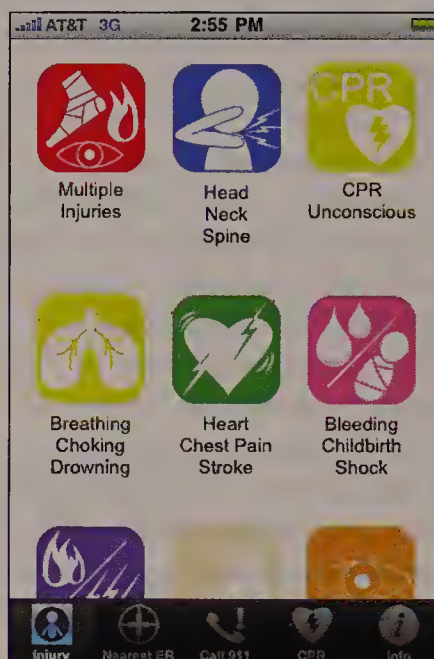
HP 12C Financial Calculator

BUSINESS Hewlett-Packard has come out with iPhone versions of its classic calculators, including this near carbon copy of the machine aimed at financial professionals. Rotate your mobile device sideways, and you'll get a photographic re-creation of the venerable HP 12C, right down to the gold-brown-orange-blue color scheme that made the original so...endearing? This app not only looks exactly the same as the physical calculator, but it runs the same code as well. Every function and key is there, and it all works—and much faster than the original HP 12C calculator, thanks to the iPhone's much faster processor (macworld.com/5094).—**ROB GRIFFITHS**
 ⚡⚡⚡⚡; \$15; Hewlett-Packard; macworld.com/5093



Documents To Go 1.2

PRODUCTIVITY This solid editing tool lets you create and manipulate Microsoft Word files, as well as view a host of other file types (though you can only view Excel spreadsheets—you can't edit them). You can type, cut, paste, format margins and type, run find-and-replace searches, and even work with tables and embedded graphics. It's a solid, stable Word editor with some sleek features and easy Wi-Fi synchronization (macworld.com/5204).—**BEN BOYCHUK**
 ⚡⚡⚡⚡; \$5; DataViz; macworld.com/5205



ResQr First Aid & CPR Coach

REFERENCE A great layperson's tool for dealing with emergency situations, ResQr offers helpful reminders to anyone who's already received CPR or first-aid training and wants to keep a cool head in the heat of the moment. A home screen of color-coded icons geared toward certain types of emergencies (breathing, choking, or drowning, for example) and a series of yes and no questions with treatment instructions depending on your answers guides you through performing tasks in stressful situations. Navigation buttons at the bottom of the screen also allow you to call 911 or look up the nearest emergency room (macworld.com/5104).—**LISA SCHMEISER**
 ⚡⚡⚡⚡; \$6; Think Safe; macworld.com/5103

TOP APPS

Financial News Apps

Bloomberg ⚡⚡⚡⚡ Stay on top of the stock market's ups and downs, and find the latest information on companies (macworld.com/5022).

We also like:

DailyFinance ⚡⚡⚡⚡
macworld.com/5119

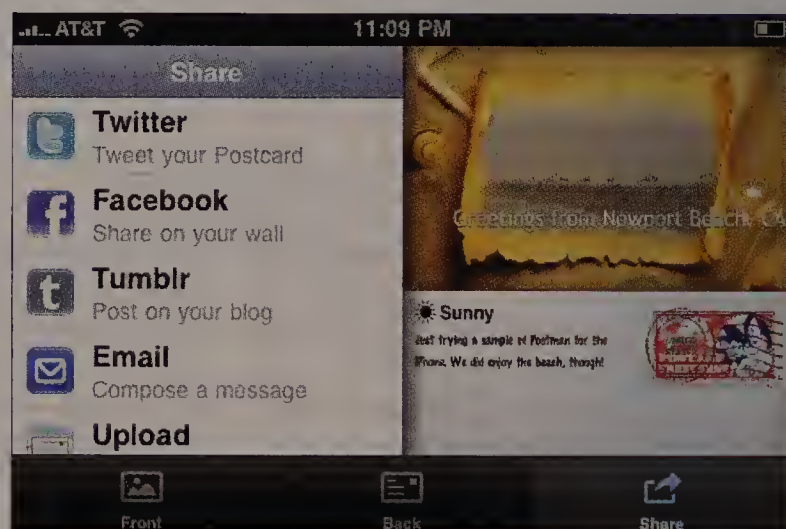
E*Trade Mobile Pro ⚡⚡⚡⚡
macworld.com/5120

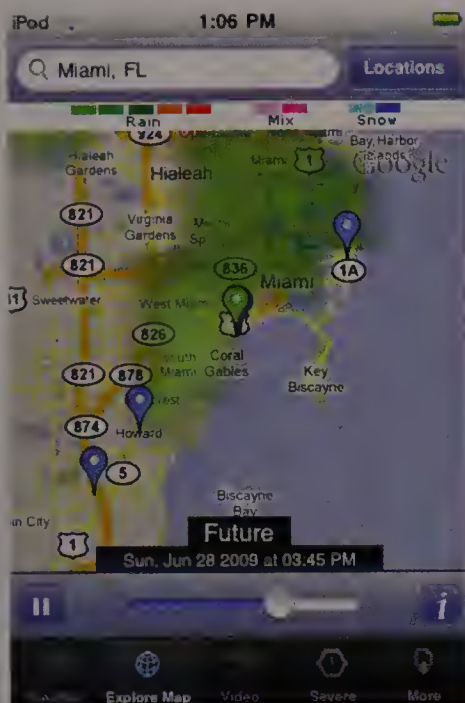
WSJ ⚡⚡⚡⚡
macworld.com/5121

Find more great financial news apps for your iPhone at macworld.com/5122.

Postman 1.2.1

PHOTOGRAPHY Like the similarly featured Postage app (⚡⚡⚡⚡; macworld.com/4981), Postman lets you turn photos stored on your iPhone or iPod touch into electronic postcards that you can e-mail to friends and family. But what distinguishes this app from Postage is its social-networking prowess: the easy-to-use Postman makes it a breeze to upload the finished product to the Web, where you can display your postcard on popular Web 2.0 sites such as Twitter, Facebook, and Tumblr (macworld.com/5098).—**JEFF PHILLIPS**
 ⚡⚡⚡⚡; \$1; Freeverse; macworld.com/5097



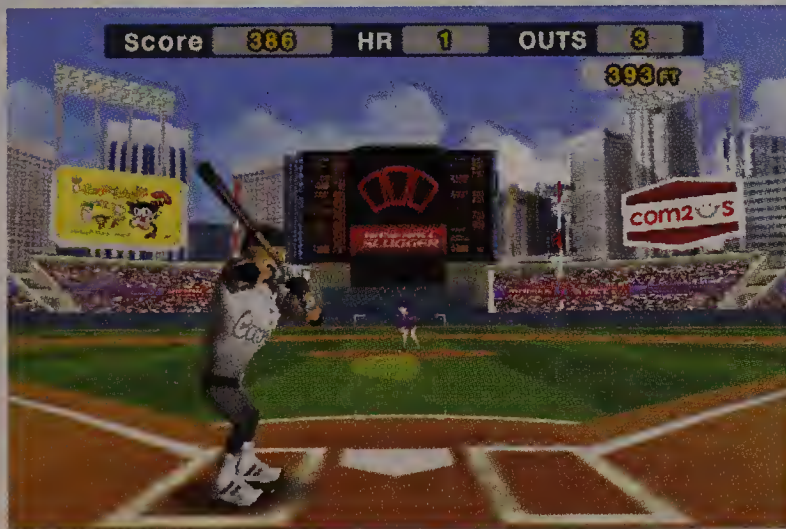


The Weather Channel Max 2.0.2

REFERENCE With plenty of free weather apps available—including the free Weather Channel app—why pony up for The Weather Channel Max? Besides being ad-free—which gives you more screen space for bigger maps—and offering a slick, intuitive interface, this paid app includes predictive radar in motion that projects future conditions on map overlays (radar, cloud cover, temperature). You also get marine forecasts and the ability to customize your start page to include hourly, 36-hour, and 10-day forecasts (macworld.com/5110).—**JEFF MERRON**
 ⚡⚡⚡⚡; \$4; The Weather Channel Interactive; macworld.com/5109

Homerun Battle 3D 1.2.1

GAMES This combination home-run derby simulator and role-playing game—formerly known as Baseball Slugger: Home Run Race 3D—lets you compete against other players via a terrific multiplayer interface. It's a cinch to head to the online matchmaking mode, find an opponent, and compete in a quick home-run derby to see who can smack the most dingers. You can also build an online game list and gain access to custom appearance and equipment configurations (macworld.com/5113).—**CHRIS BARYLICK**
 ⚡⚡⚡⚡; \$5; Com2uS; macworld.com/5112



More Reviews

See more iPhone and iPod touch apps we've tested at iPhone Central (macworld.com/4164).

APPLICATION	DESCRIPTION	PRICE	RATING	FIND CODE *
3D Rollercoaster Rush 1.1.0 Digital Chocolate	game	\$5	⚡⚡⚡½	5209
B&N Bookstore 1.0.1 Barnes & Noble	book-retailing app	free	⚡⚡⚡	5210
Midomi Music Identifier and Search 2.1 Melodis	music ID app	\$5	⚡⚡⚡½	5211
MotionX GPS 6.1 MotionX	GPS app	\$3	⚡⚡⚡½	5212
Twitterena 2.4 Andrew Weekes	Twitter client	\$1	⚡⚡⚡½	5213

* In a browser's address field, typing in find codes after macworld.com/directs you to a product's review or overview. For example, macworld.com/5209 takes you to our review of 3D Rollercoaster Rush.

ESSENTIAL APPS

Tell 'em What They've Won, Johnny

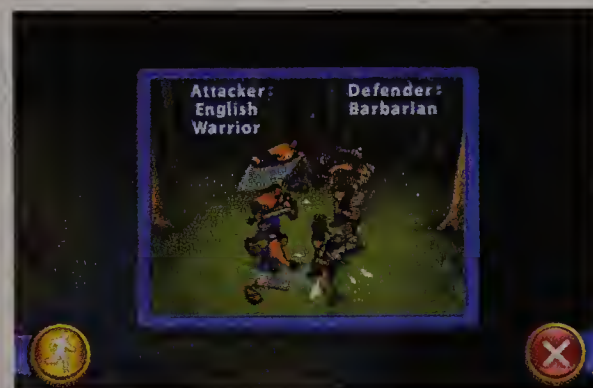
Game shows are making the leap from the TV to the iPhone. Here are some of our favorites (macworld.com/5208):

Jeopardy ⚡⚡⚡½ The answer: This popular quiz show is now available for the iPhone.

The Price Is Right Any game that includes Plinko is a game worth having.

Wheel of Fortune ⚡⚡⚡½ This p_zz_l_g_m_s gr_t f_n.

Who Wants to Be a Millionaire ⚡⚡ This game needs more Regis.



Civilization Revolution

GAMES The turn-based strategy game arrives on the iPhone, but this isn't a simple port. Civilization Revolution boasts a new gesture-based interface. The depth of the game remains intact, but it's just as easy to play for a few minutes as it is to immerse yourself in a long campaign. The controls are great, the soundtrack is memorable, and the battle sequences are great fun (macworld.com/5206).—**CHRIS HOLT**
 ⚡⚡⚡½; \$5; 2K Games; macworld.com/5207

App Guide

Get more reviews, including reader reviews, as well as listings for every iPhone app at AppGuide.com.



Let It Snow!

Everything you need to know about Mac OS X 10.6

In June 2008, Apple announced that its next version of Mac OS X—Snow Leopard, or Mac OS X 10.6—would ship in “about a year.” More importantly, the company said that, unlike previous versions of OS X, Snow Leopard would focus on improved performance and stability, rather than on new features.

Well, you can’t always take Apple at its word. “About a year” turned into 15 months; the company said in June 2009 that Snow Leopard would ship in September, and it actually shipped at the end of August. And while it’s true that OS X 10.6 doesn’t include hundreds of new features, there’s more to it than just performance and stability tweaks. There are, in fact, some significant changes, under the hood and throughout the user interface.

In the pages that follow, you’ll find our explanations of those new features, our lab-tested assessments of Apple’s performance claims, and our verdict on whether or not this upgrade is worth your time and money. And you can take our word on that.

ILLUSTRATION BY SPLASHLIGHT



REVIEW:

SNOW LEOPARD

Mac OS X 10.6 upgrade: price, performance, feature tweaks By Jason Snell

Apple has spent ten years refining Mac OS X, fusing the classic Mac OS with technology acquired from Steve Jobs's Next to make a mainstream operating system that's widely considered the best in its class. But after a decade of regular operating-system upgrades, Apple has taken a pause with the release of Mac OS X 10.6—also known as Snow Leopard. Instead of adding hundreds of new features, Apple has chosen to use Snow Leopard to cut ties with the past, prepare for the future, and take dead aim at its present competition.

The result is a Mac OS X update unlike any in recent memory, one that boosts speeds, reclaims disk space, tweaks dozens of features, and lays the groundwork for the next generation of computers. These features, combined with the low upgrade price of \$29, make Snow Leopard the biggest no-brainer of an upgrade since Mac OS X 10.1. (And

that upgrade, the aged among us will recall, was free.)

MAKING THE UPGRADE

Unlike previous editions of Mac OS X, which could be freely installed on any Mac that met the system requirements, Snow Leopard's license specifically limits it to users who are already running Mac OS X 10.5 (Leopard), which has been shipping since October 2007. If you are a Leopard user, you can upgrade a single Mac to Snow Leopard for \$29, or as many as five Macs in one household with the \$49 Snow Leopard Family Pack. Users of Mac OS X 10.4 (Tiger)—most of whom bought Intel Macs before Leopard was released and chose not to upgrade—are supposed to purchase the Mac Box Set, which includes Snow Leopard, iLife '09, and iWork '09, for \$169. (Snow Leopard doesn't run at all on PowerPC-based Macs.)

However, in contrast to Windows—which comes in a confusing array of full and upgrade versions that require you to enter a unique serial number to prove you're not a pirate—OS X continues to operate on the honor system. Snow Leopard does not require a serial number. Moreover, its standard version is a bootable “full install” disc that

Snow Leopard



PROS: Generally faster than Leopard; supports Exchange; rudimentary malware checking; most applications run in 64-bit mode; improvements to Exposé and the Dock.

CONS: Lackluster QuickTime Player update; many features won't truly be exploited until Mac hardware evolves.

PRICE: single-user upgrade from Leopard, \$29; five-user upgrade from Leopard, \$49; Tiger upgrade as part of the Mac Box Set with iLife '09 and iWork '09, \$169

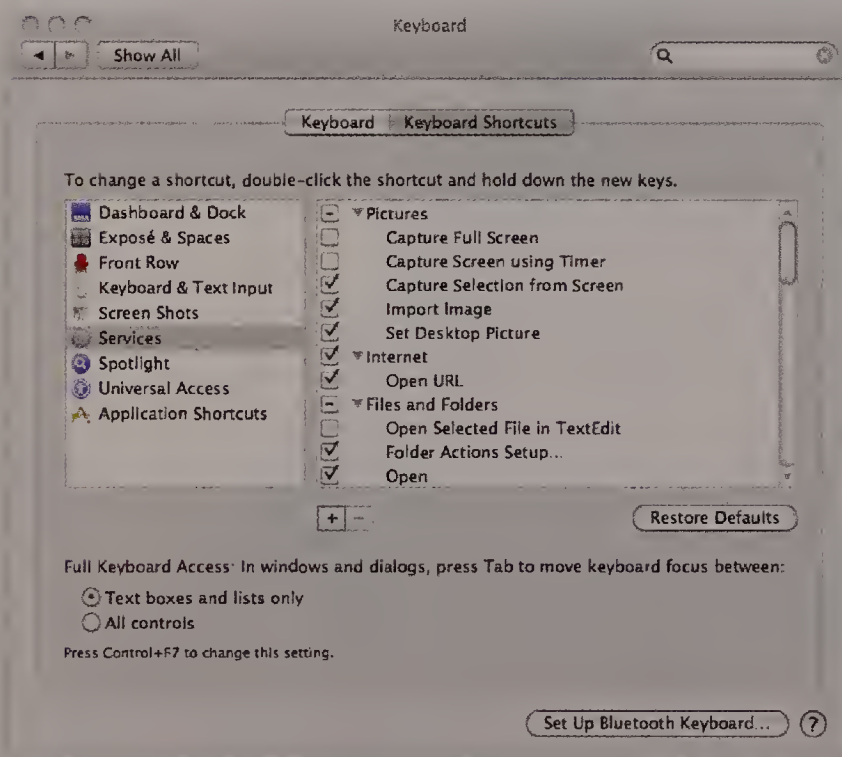
COMPANY: Apple, www.apple.com

doesn't actually check to see if you have Leopard before it installs. If you ever want to wipe your hard drive and reinstall Snow Leopard, you won't have to first install Leopard and then upgrade Snow Leopard on top of it.

The Snow Leopard installation process isn't like previous OS X installers. Apple has taken much of the wait out of that process: You can now select your installation settings and then walk away; the rest of the process (including a reboot) can proceed without any more direct intervention (see “Installing Snow Leopard,” page 48).

The installation of printer drivers is entirely different in Snow Leopard. By default, the Snow Leopard installer will provide drivers for printers your computer has used in the past, any printers it finds on your network, and a small group of the most common printer models. The result is a massive savings in hard-drive space.

What happens if you encounter a strange, new printer? If you've got an Internet connection at that moment, you shouldn't have much trouble: Snow Leopard will automatically download and install the drivers it needs. If you really need bulletproof compatibility, you can



Services Snow Leopard provides a long-overdue overhaul of the Services menu, which you can now manage from the Keyboard Shortcuts preferences tab.

opt to install all the drivers—you just won't realize the disk-space savings you might have otherwise.

Rosetta, the technology that enables code compiled for PowerPC chips to run on Intel chips, is available—but is *not* installed by default. However, if you try to run a PowerPC-only app, Snow Leopard will pop up a window that explains you need Rosetta and will offer to install it for you (via Apple's Software Update utility).

A FAMILIAR FACE

In previous OS X updates, Apple made major changes to the Mac interface. Not so in Snow Leopard: it looks largely the same as Leopard. But Apple has made some functional tweaks to the OS X interface, particularly with the Dock and Exposé.

For example, if you Control-click on an item in the Dock, you'll see that the contextual menus no longer sport the standard black-text-on-white-background style, as seen elsewhere in OS X. Instead, they show white text on a translucent black background. These menus match the look of the Dock, but they don't match any other contextual menus in Mac OS X.

More substantially, you can now scroll through Stacks in Grid view, so you can see much more of what's in a particular folder. You can also click on a folder to drill down into its contents from within Stacks. This new functionality is enough to make me actually use Stacks' Grid view regularly for the first time, with my Downloads folder.

Snow Leopard also offers an alternative to the way the little yellow minimize button on every window works. There's a new Minimize Windows Into Application Icon checkbox in the Dock preference pane. After you check that box, clicking the yellow button makes windows disappear into the icon of the applications they belong to in the Dock, reducing Dock clutter. And when you invoke Exposé, all minimized windows line up together at the very bottom of the screen.

Exposé's been improved, too. When you click and hold on an app's icon in the Dock, Exposé displays all the windows belonging to a given app. For people who use the mouse more than the keyboard,



File Quarantine Snow Leopard will issue a stern warning if you try to download a file that contains known malware.

OS X GETS BUILT-IN MALWARE PROTECTION

By **DAN MOREN**

While malicious software is a regular annoyance on Windows PCs, most Mac users give it little thought. Apple has encouraged that nonchalance, touting the Mac's comparative safety. Sure, Mac malware threats arise from time to time; last January, a Trojan horse made the rounds in pirated copies of Apple's iWork suite. But most of us probably run our Macs without protection against these threats.

With the release of Mac OS X 10.6 (Snow Leopard), that will change: For the first time, Mac OS gets its own built-in tools for detecting malicious software.

How It Works

For several generations now, OS X has had the File Quarantine system for validating downloads. This system produces the dialog box that pops up when you first open files downloaded from the Internet, warning you of potential risks and letting you open them, cancel the open command, or view the source Web page.

In Mac OS X 10.6, File Quarantine also checks downloads against a list of known malware. When Snow Leopard first shipped, that file (/System/Library/CoreServices/CoreTypes.bundle/Contents/Resources/XProtect.plist) contained just two definitions: the OSX.RSPlug.A Trojan Horse and OSX.iService (the malware embedded in the pirated iWork installer).

Apple says that the list will be kept current and that users can update the list through Software Update, but the company hasn't indicated what the frequency of those updates will be. In the past, Apple has been accused of responding sluggishly to security threats.

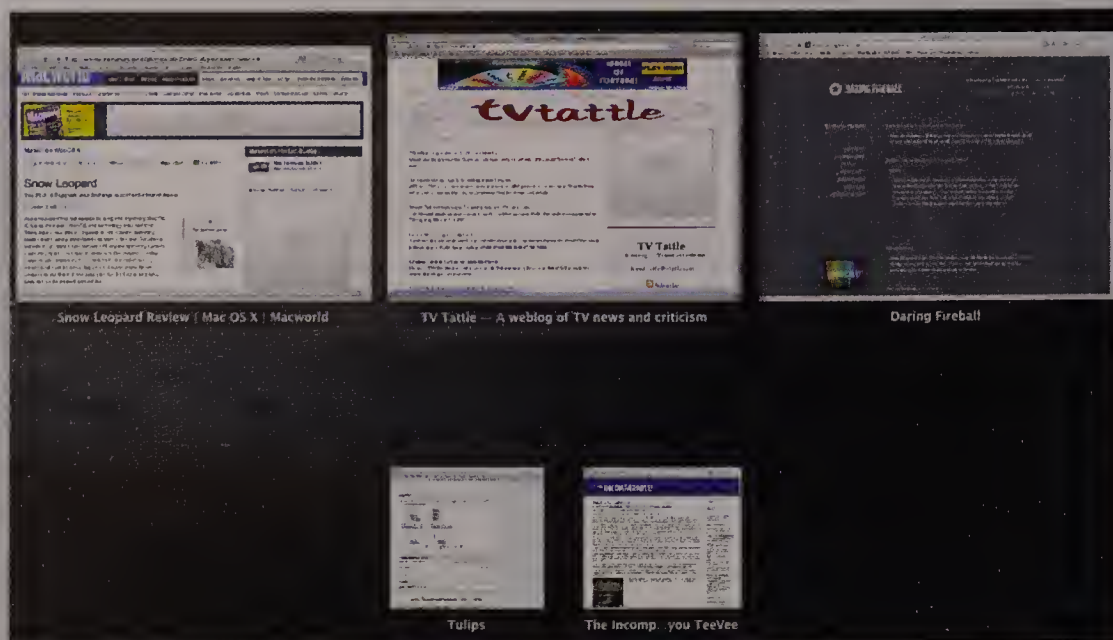
If you try to open a file that's on the list, Snow Leopard will tell you that the file will damage your computer and suggest that you move it to the Trash, and then it will give you the option to continue or cancel. The warning will reappear each time you open the file, not just the first time. In my initial tests, Snow Leopard successfully detected the OSX.RSPlug.A Trojan horse when I tried to open a file infected with it.

Snow Leopard also expands the list of apps for which it will quarantine downloaded files. They now include: Safari, Internet Explorer, Firefox, OmniWeb, Opera, Mozilla, Camino, Mail, Entourage, Thunderbird, and iChat. If you grab an infected file with a program that isn't on that list—with an FTP client, for example, or via BitTorrent—the system won't detect it.

What It Means

Apple's integration of antimalware tools is a tacit admission that OS X isn't inherently immune to malware. But it doesn't mean you can download files without any regard for safety. As always, your own common sense will still be the best protection against malware. Snow Leopard's new detectors just help bolster that caution. You should still download files only from trusted sources, refrain from opening e-mail attachments from unknown senders, and make sure you use strong passwords.

The antimalware feature doesn't mean the end of third-party antivirus software makers (such as Symantec and Intego). Apple says that it "isn't intended to replace antivirus software, but affords a measure of protection against the handful of known Trojan horse applications that exist for the Mac today." Snow Leopard's antimalware tools are more prophylactic than cure.



Better Exposé When you click and hold on an app's icon in the Dock, Exposé displays all its open windows. (Minimized windows appear below the faint line separating the top and bottom.)

this method is much more natural than fumbling for a function key (or, if you're like me, punching all the function keys in turn until you finally find the right one). It even works via drag and drop: Drag an item onto an app's Dock item and hover there for a split second, and Exposé kicks in. You can drag your item over a particular window and then drop that item wherever you want it.

Though you wouldn't know from looking at it, Apple has entirely rewritten the Finder in Snow Leopard. Apple says that the file manager should feel more responsive now, because it's running in 64-bit mode and takes better advantage of multiple processor cores due to its use of Grand Central Dispatch (more on that later). Visual changes to the Finder include the ability to display icons as big as 512 by 512 pixels, adjust icon sizes right within a window via a handy slider control, and page through PDFs and play videos right within their Finder icons.

EXCHANGE WITHOUT ENTOURAGE

When Apple first decided to embrace Microsoft's popular Exchange server software, it did so with a major software update—for the iPhone. The iPhone 2.0 software update (📱📱📱; macworld.com/5039) brought support for Exchange calendars, contacts, and mail directly onto Apple's mobile platform. Now, with Snow Leopard, your Mac can connect directly to

Exchange servers. Mail, iCal, and Address Book can all be configured easily to connect to corporate Exchange servers. (As Apple has not been shy in pointing out, the Mac now has better Exchange connectivity out of the box than Windows does.)

I've been using Snow Leopard with an Exchange server for a couple of weeks now, and it's been quiet, stable, and even pleasurable. I was able to acknowledge meeting invitations from within Mail and check a colleague's availability in iCal to schedule a meeting. Because my organization doesn't yet use Exchange, I couldn't do a large-scale test; users in massive Exchange-based enterprises will certainly be able to evaluate it more rigorously than I could. (See macworld.com/5264 for one IT professional's take on the matter.)

Several months before I started testing Snow Leopard, my company's IT director suggested that at some point in the future we might move to Exchange. I admit that I was full of trepidation when he said so, largely because I'm not a big fan of Microsoft Entourage, which at the time was the only real way to get Exchange support on the Mac. But with the release of iPhone 2.0 and now Snow Leopard, my views on Exchange have taken a 180-degree turn. If our IT department wants to move us to Exchange, I now say bring it on. (No wonder Microsoft announced—and just in advance of Snow Leopard's release!—that it would be replacing Entourage

OS X 10.6: THE LITTLE THINGS

Here are nine of Snow Leopard's most notable feature tweaks



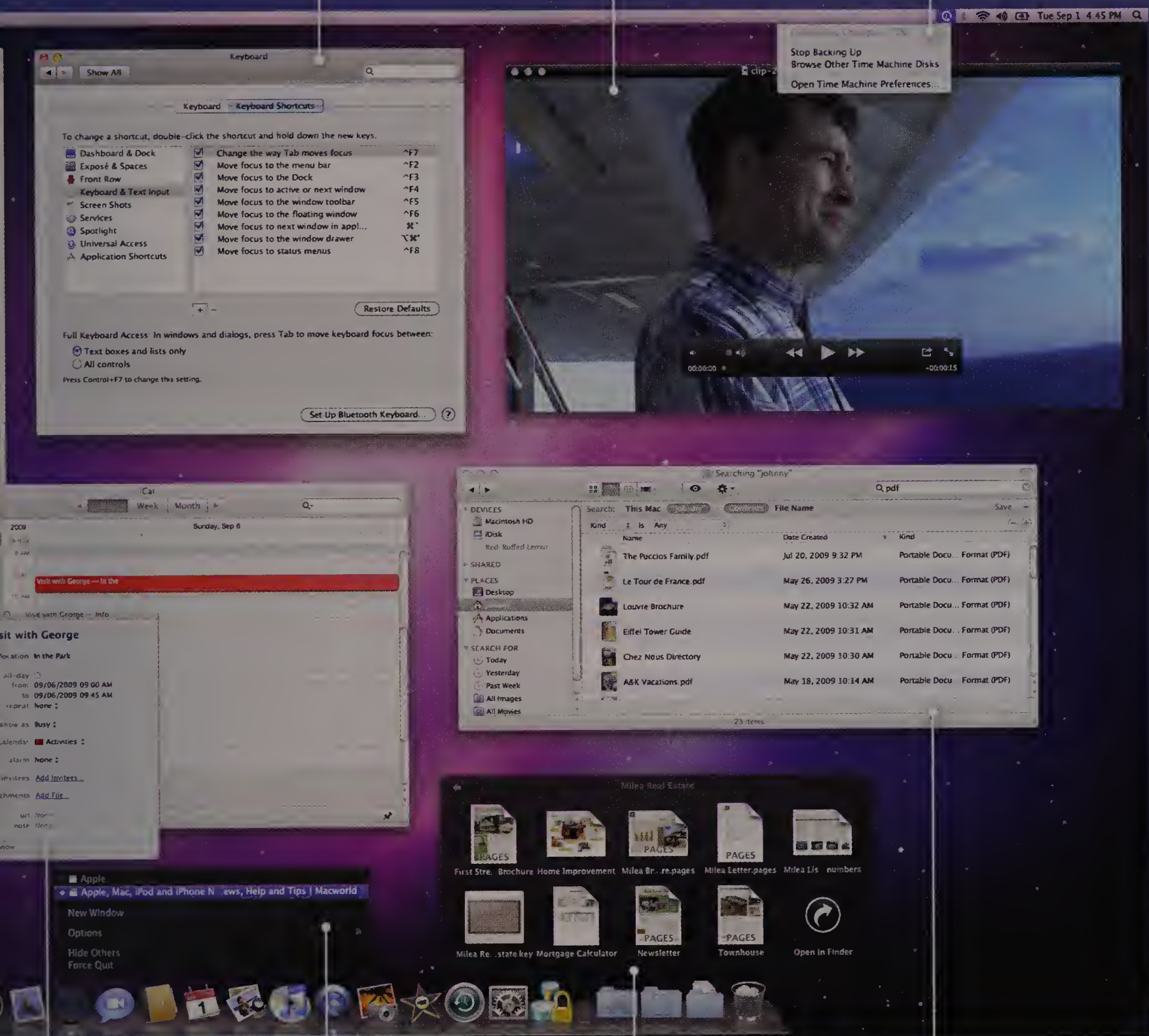
SMART EJECT When OS X tells you it can't eject a disk because that disk is still in use, it now also tells you which application is using it.

BIGGER ICONS Finder icons can now be up to 512 by 512 pixels—four times the pixels of Leopard's biggest.

MANAGING SHORTCUTS The Keyboard Shortcuts tab is easier to navigate: Categories are on the left, related shortcuts on the right.

QUICKTIME X The media player's interface has been stripped: Open a movie and it appears with only a black bar at the top; controls faded in and out.

TIME MACHINE The Time Machine menu bar provides more information, including numerical progress reports on your backups.



CALENDAR EDITING In the new version of iCal, you can set the event-editing window to float and display information about any selected event.

DOCK MENUS The Dock's context menus are different: They're white text on a black background, and several options have been consolidated in an Options submenu.

STACKS Scroll through Stacks in Grid view to see more of what's in a folder—helpful if your Stacks folders contain lots of items.

VIEW SEARCHES You can customize viewing options for Spotlight searches in the Finder—displaying the date a document was created, for example.

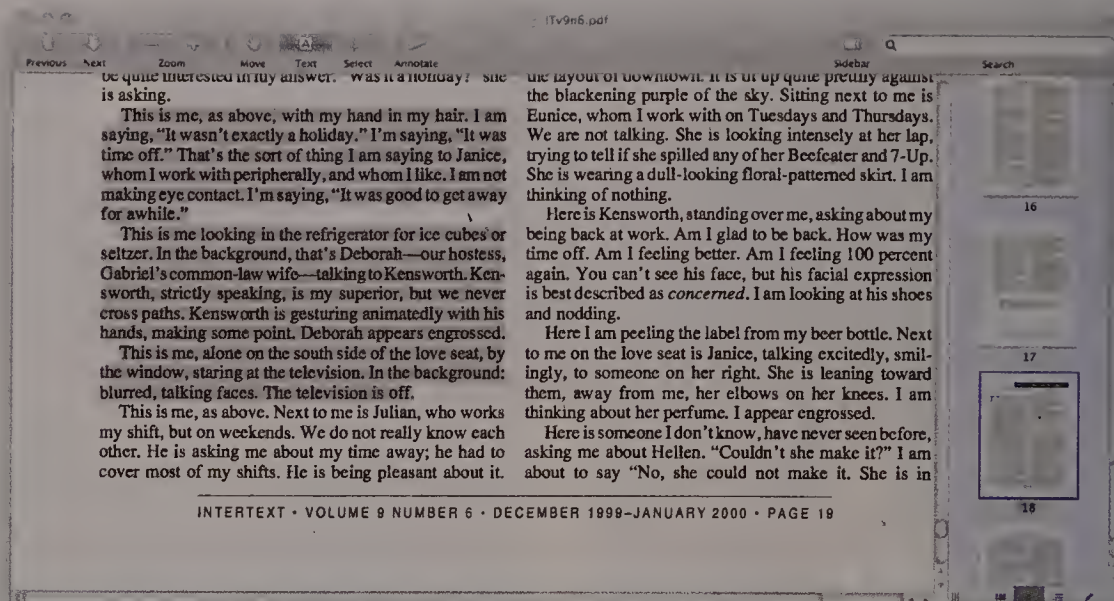
with Outlook for Mac sometime in the next 15 months. If I were Microsoft's Mac Business Unit, I'd be deathly afraid that by the time the new Outlook ships, every Exchange-using Mac around will be running Mail, iCal, and Address Book.)

APP CHANGES

Mac OS X ships with about four dozen applications and utilities. Most of them have been tweaked, at least a little bit, in Snow Leopard.

The biggest changes are in Preview, Apple's catchall utility for viewing images and PDFs; I've been using it as my default PDF viewer for years. Snow Leopard improves it with easier text selection (especially in documents with multiple columns) and a new Annotations toolbar for marking up PDFs with comments.

Several of OS X's built-in apps—including TextEdit, Mail, and iChat—can take advantage of a new systemwide Substitutions service that can autocorrect common mistakes (think **teh** to **the**), convert straight quotes to smart quotes and vice



Intelligent Selection Selecting text in a PDF file using Preview is much improved: The OS is smart enough to recognize multicolumn pages and let you select text in just one column.

versa, and turn double-minuses and triple-periods into em dashes and ellipses. In a tab in the Keyboard preference pane, you can add shortcuts of your own.

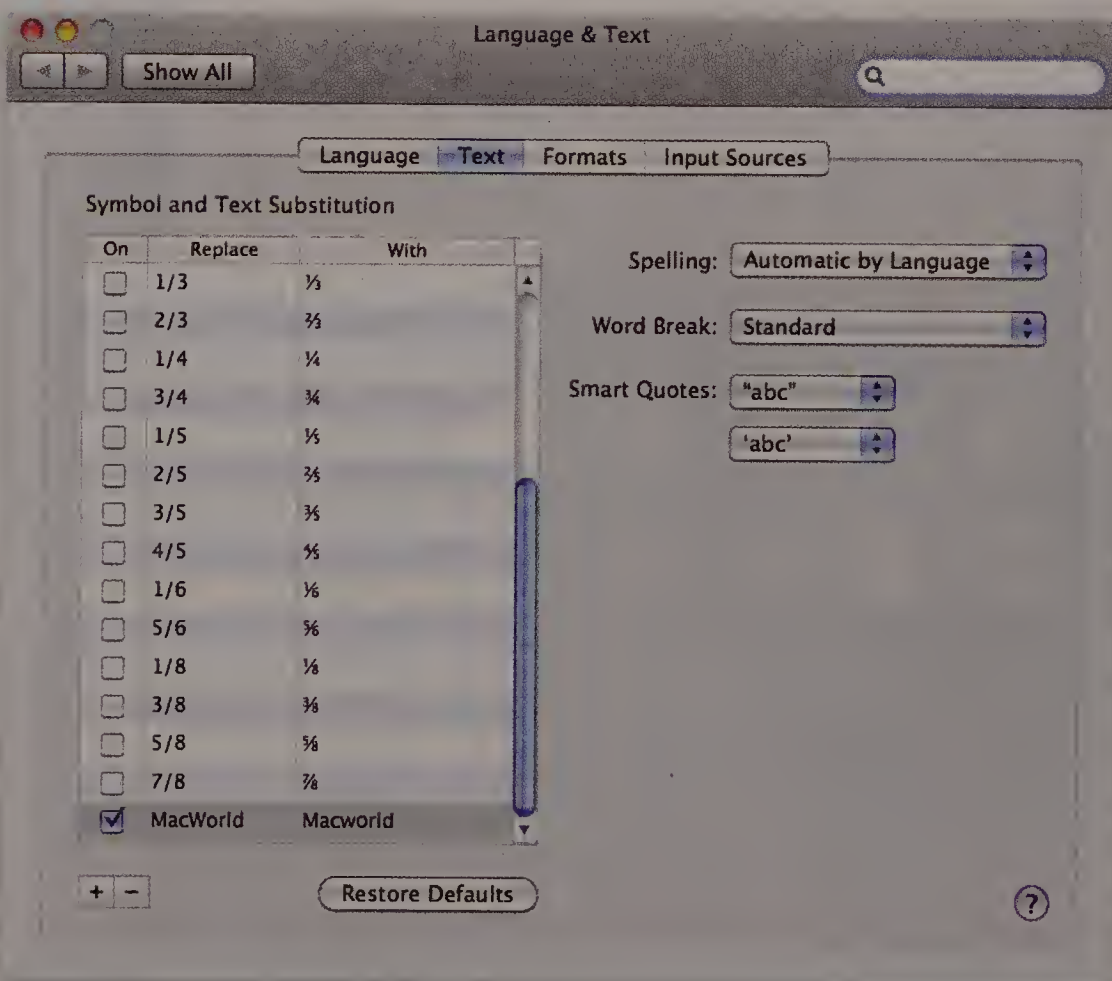
Snow Leopard ships with Safari 4, the latest version of Apple's Web browser. Version 4 has been available for Leopard for some time now, but the copy that comes with Snow Leopard runs in 64-bit mode, which accelerates some JavaScript

math routines. More importantly, browser plug-ins (such as Flash) now run as separate processes within Safari, so plug-in errors shouldn't kill your whole browser. In several weeks of using Safari in Snow Leopard, I haven't had a plug-in crash; however, the entire browser itself did crash, several times.

QuickTime Player, Apple's tool for playing back audio and video, has been completely revamped for Snow Leopard and is now called QuickTime Player X. Unfortunately, this new app lacks many of the previous version's features. (QuickTime Player 7 is available as an optional installation.)

Apple says that it wanted to optimize the QuickTime Player interface for media playback. In fact, that interface is almost nonexistent: Open a movie, and it appears by itself, with only a small black bar at the top of the window indicating its name. As you play the video, the interface fades away; you're left with just the movie playing on your screen. Controls (volume, forward, play, reverse, full screen, and scrubbing bar) are in a floating palette within the movie frame.

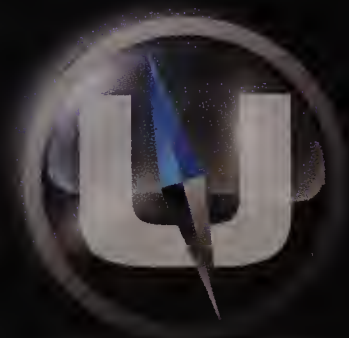
That interface is OK in full-screen mode but a disaster otherwise. Any time you alter your settings, even change the volume slightly, the floating palette and the window bar appear, obscuring your video. When you play a movie, even the movie's title bar disappears, at least until you move your mouse over it. It looks, quite frankly, like a mistake.



Substitutions In the Language & Text preference pane, you can enable systemwide text substitutions, to automatically correct misspellings or insert special characters.



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Despite its focus on playback, QuickTime Player X offers some editing tools, such as trimming, sharing, and recording. The trimming feature is extremely basic, no more complicated than what you get on the iPhone. The sharing feature is far more limited than what you used to get with QuickTime Pro—you can choose from three video-export presets or share files through MobileMe or YouTube.

QuickTime X includes recording features that allow you to grab the contents of your computer screen and save it as a QuickTime movie. QuickTime X failed completely when I tried to capture my MacBook Air screen, despite the fact that I've successfully captured video on this same system using both Ambrosia Software's Snapz Pro X and Telestream's ScreenFlow.

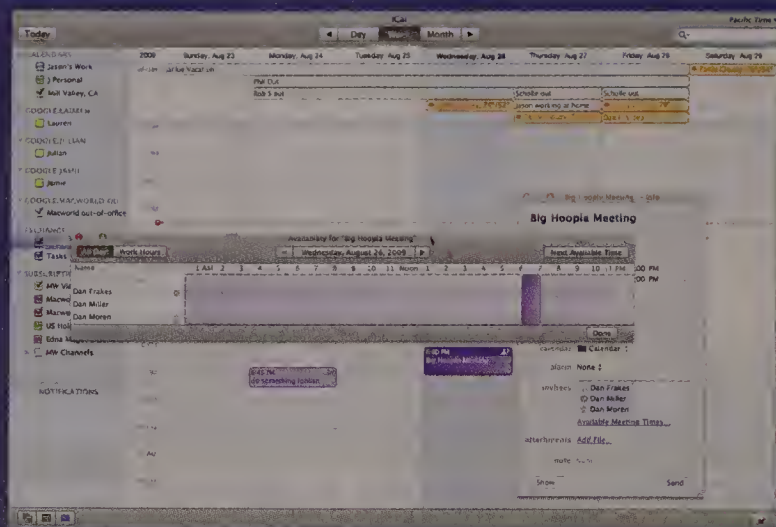
In general, if you've ever used QuickTime Pro to cut, export, or massage media, you'll be disappointed by QuickTime X. (For more on the new version of QuickTime, see this month's *Playlist*, page 72.)

NIFTY SMALL TOUCHES

Failing a massive makeover, then, we've got to take joy in the little gifts that Snow Leopard gives us. And there are a lot of them. I'd like to pick my favorite, but the fact is, they're all small enough that I can't really choose one. But if I could gather up the whole lot of them in my arms, I'd give them a hug.

Ejecting disks is much easier now, and given that I connect to an external drive every day at work, I know the pain of trying to dismount a volume only to be told that something, somewhere on my Mac believes that my external drive is vitally important and is clinging to it like a child does a security blanket. Now when you try to eject a disk, its Finder icon dims and the system sends a message telling all running apps that they should let go unless they've got a really good reason not to. If that fails, the system displays a helpful window telling me which app doesn't want to let go.

As a full-time MacBook user, I'm endlessly putting my Mac to sleep and waking it back up. In Leopard (and in



Who's Free? Using iCal with Exchange, you can see who is available for a meeting and when.

BETTER FOR THE OFFICE: OS X MEETS EXCHANGE 2007

By **MICHAEL SCALISI**

Microsoft Exchange is the standard groupware server for business, allowing workers to share calendars, contacts, and e-mail. With Snow Leopard, OS X gets better built-in support for Exchange 2007 than Windows itself does.

This means that you can sync iCal, Address Book, and Mail with Microsoft Exchange 2007 servers, without any third-party apps, conduits, or messy work-arounds; you don't need to install Microsoft Office. The only requirement is that your company be running Exchange Server 2007 (Update Rollup 4 for Service Pack 1 or later); Snow Leopard won't work with versions earlier than that.

Configuration

Assuming that your Exchange administrator has enabled Autodiscover, you can open the Accounts pane in Mail and enter your Exchange e-mail address and password, and your server information will automatically be configured. Unless you deliberately opt not to, your Address Book contacts and iCal calendars will be configured using the same settings. (If Autodiscover is not enabled on your server, you can just enter the name of your Exchange server manually.) In my testing, the configuration worked over both a corporate network and the Internet.

The Good

Once I'd connected to the Exchange server, I began testing it by setting up a meeting in iCal and inviting people from my organization to it. iCal was able to use the free/busy status information from the

Exchange server to determine invitees' availability. It also was able to suggest the next available time slot when all those invitees were available. It's very simple. You can also maintain personal calendars alongside those in Exchange.

Mail and Address Book also just worked. On launching the latter, you'll notice your Exchange contacts and an icon to search the global address book. One nice feature here is Smart Groups, which can mix contacts from both corporate and personal address books. Of course iCal and Mail can both use these Address Book entries for auto-completion when sending e-mail or meeting invitations.

The Not-So-Good

That said, OS X's Exchange-friendly apps are not always equal to Microsoft Outlook. For instance, you can't easily set an out-of-office message to run on the Exchange server. And you can't configure server-side rules in Exchange.

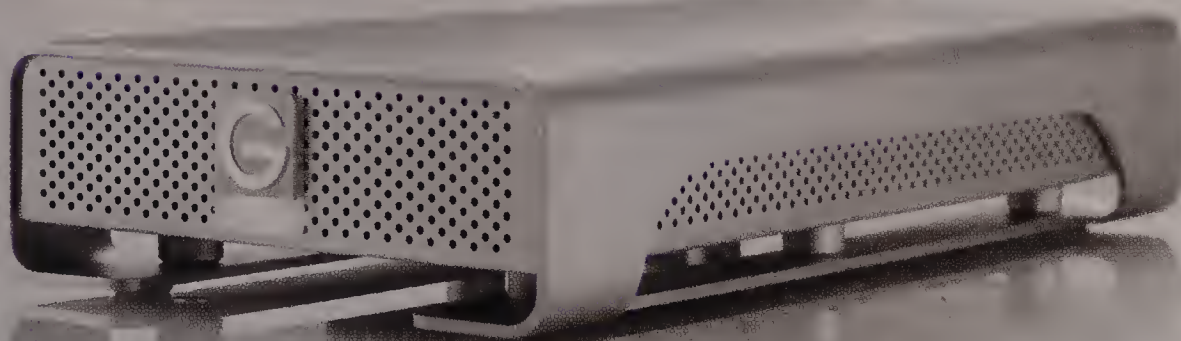
You'll also likely notice that Mail is slower than Outlook. When you're connected to Exchange via Outlook, messages sent to you by coworkers appear almost immediately. By comparison, the Mail program defaults to checking the server every five minutes. (You can change the setting so that it checks more frequently.)

The Bottom Line

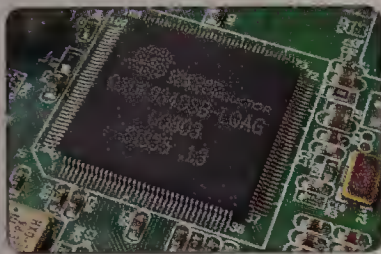
Despite those quibbles, Mac OS X 10.6 delivers essential Exchange compatibility, allowing Mac users to feel more at home in corporate Exchange environments.

I may be
beautiful...

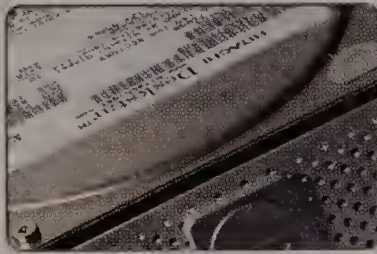
But it's what's
on the inside that
really counts!



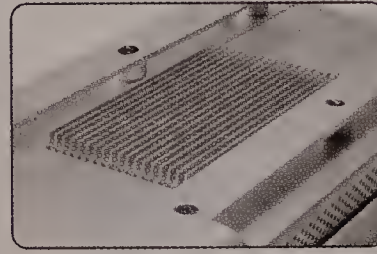
The folks at G-Tech built me with only the highest-quality components inside. My rugged, all-aluminum enclosure and built-in heat-sink keeps my hard drive safe and cool, and me whisper quiet. All of this attention to detail makes me the best place to store your stuff. Don't trust anything less.



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previous OS X versions), mounted servers generally didn't withstand the wake-up process. Snow Leopard handles this situation a lot better. An alert window still appears—but as it sits there, Snow Leopard attempts to reconnect to those servers, to bring me back to where I was before. Generally, it works like a charm.

Snow Leopard is also much smarter when it comes to sharing files with sleeping Macs. If you're on a network with an AirPort base station or a Time Capsule, Snow Leopard allows those devices to wake up when another Mac wants to share files, and then puts them back to sleep when the file-sharing session is over. So if you can get the network settings to work correctly, you can put your Mac to sleep and still access its files when you need them.

In Snow Leopard, scripting and automation have finally received nice updates, thanks to a long-overdue overhaul of Mac OS X Services. Anyone who dared to visit the OS X Services menu (located in a program's Application menu) in past versions saw a hodgepodge of different and often mysterious commands—let's be honest, very few of us ever ventured in there. The new services system seems more likely to reach a broader (albeit still somewhat geeky) audience. Users can create new services via the Automator utility, and then run them via either the Services menu or a contextual-menu item within any relevant application.

A stealth feature in Snow Leopard is its limited ability to check downloaded files for known malware, the catchall name for evil software such as viruses and Trojan-horse programs. This new

scanning ability is tied into the existing protection system that warns you before opening apps or mounting disk images you've downloaded from the Internet.

Although this is minimal protection, it's a good line of defense for unsuspecting users, and Apple should be congratulated for providing it. However, Apple's system is no match for third-party virus checkers, and even Apple admits

as much. For more information about this feature, see "OS X Gets Built-In Malware Protection" on page 35.

UPGRADE TO GO FASTER?

Most of the time, software upgrades add new features at the expense of speed. But since Snow Leopard was announced, Apple has repeatedly said that this update is about not just fixing bugs and making tweaks, but also improving performance. Macworld Lab compared Leopard to Snow Leopard in 16 speed tests on three systems. On half of those tests, Snow Leopard showed definite speed improvements.

Snow Leopard outperformed Leopard on a Time Machine backup (Snow Leopard was 32 percent faster on average

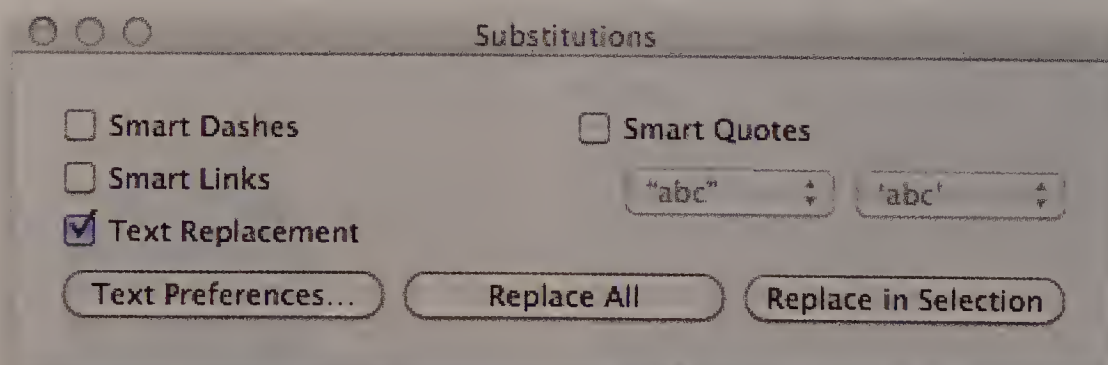
at that than Leopard), shutdown time, encoding a video file in H.264 format, scrolling a PDF in Preview, running the SunSpider JavaScript benchmark test, zipping a 2GB folder, importing photos into iPhoto, and scrolling a document in Pages. In two other tests, Leopard was slightly faster than Snow Leopard; in the rest, the results were either a mixed bag or identical between operating systems. (For more details on our testing, see "Is Snow Leopard Really Faster?" page 46.)

My subjective experience using Snow Leopard for several weeks is consistent with those lab results. Some tasks simply feel faster in Snow Leopard than in Leopard, while others seem no different at all. In general, I think most users will find that Snow Leopard feels snappier and runs smoother than its predecessor.

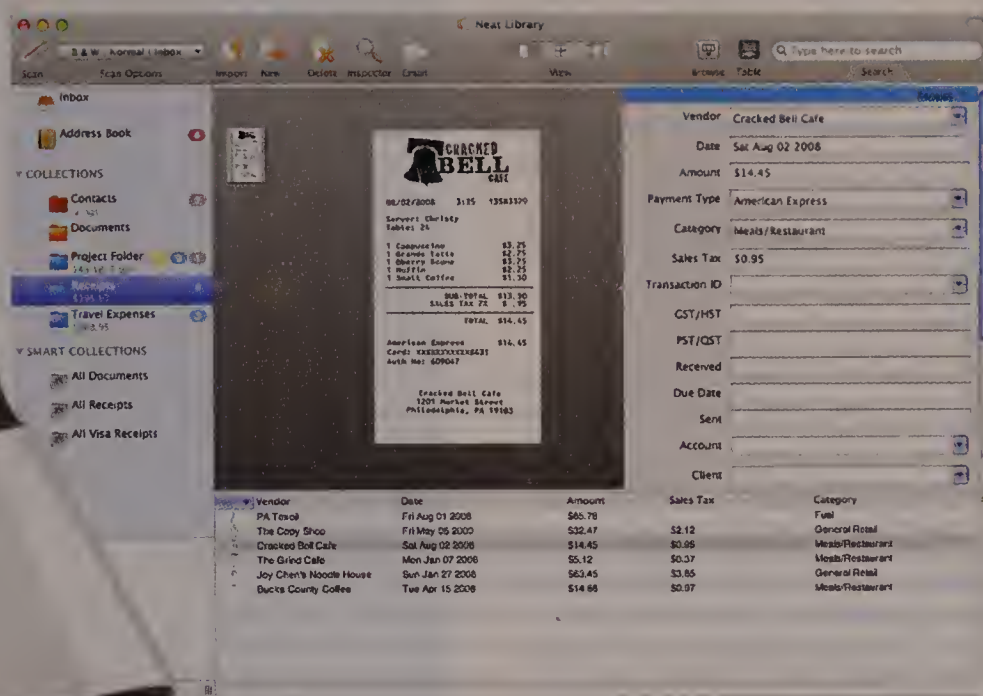
But in the future, Snow Leopard could potentially run your software dramatically faster, thanks to several new under-the-hood technologies. One of those technologies, Grand Central Dispatch, will help software take greater advantage of the multiple processing cores available in modern CPUs. Another technology, OpenCL, lets programmers take advantage of the massive processing power locked up



Active Icons A Snow Leopard file icon can do more than show you what kind of file it is; you can, for example, play movies within their file icons.



Substitutions Thanks to Snow Leopard's new built-in Substitutions tool, you can correct common misspellings and typography in apps like TextEdit and Mail.



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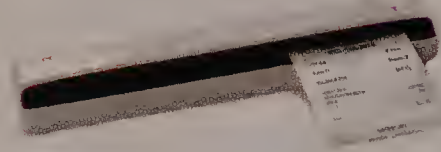
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in a computer's graphics processor (see "Under-the-Hood Additions," page 47).

Neither of these features is a reason to buy Snow Leopard today. But they will help make the next Mac you buy much faster than it would have been otherwise.

Usually, major operating-system upgrades mean more features but less stability (at least initially, until the bugs get worked out). While Apple's engineers have had nearly two years to wring such bugs out of Leopard, the new features introduced in Snow Leopard will no doubt introduce more. But so far, Snow Leopard seems as stable as it is fast. I had a few crashes in Safari and Mail, but Apple will presumably address those problems in upcoming updates. So far, though, stability issues have not made me regret switching from Leopard to Snow Leopard.

MACWORLD'S BUYING ADVICE

Snow Leopard is Apple's lowest-priced OS update in eight years. Its feature tweaks, upgrades, and under-the-hood modifications might not pay off for you immediately, but the upgrade price is so low that I've got to recommend it for all but the most casual, low-impact Mac users.

If you've got a 32-bit Intel Mac (that is, one powered by a Core Solo or Core Duo processor), the benefit of this upgrade will be a little less. But for most Mac users (especially the kind who read a magazine devoted to the subject), the benefits of Snow Leopard outweigh the price tag. I'd pay \$30 just for the improved volume ejection, the ability to create services with Automator, and the improvements to the Dock and Exposé—though I admit I'd pay slightly more to not have the misguided QuickTime Player X as a part of the package. If you're a user who connects to an Exchange server every day, upgrading to Snow Leopard really is a no-brainer.

For everyone else, maybe it's not *quite* a no-brainer—but it's awfully close. Snow Leopard is a great value, and any serious Mac user should upgrade now.

Jason Snell is Macworld's editorial director and has been writing about Mac OS X since the very beginning.

SERVICES THAT MAKE SENSE (FINALLY!)

By **ROB GRIFFITHS**

The Services menu in OS X has always been better in theory than reality.

The theory has been that services let you perform common operations on files or text, no matter which app you're using. Select a file in the Finder, for example, then navigate to Finder ► Services ► Mail ► Send File, and the file will be attached to a new e-mail message. In reality, however, the Services menu has been unwieldy—disorganized, hard to manage, and bloated. For those reasons, I have rarely used services—and most users I talk to have felt the same way.

Snow Leopard, I'm thrilled to report, addresses these issues head-on. Services are now not only really useful, but more powerful than ever.

Control and Context

For starters, you now have much more control over what appears (or doesn't appear) in the Services menu. The Keyboard Shortcuts tab of the Keyboard system preference now has a Services section. There, you'll see a list of all services installed on your Mac, where you can enable, disable, and assign keyboard shortcuts to them.

Another big change is that the Services menu is now *contextual*, meaning it shows only those services that make sense for whatever you're currently doing. For example, if you select an image file in the Finder and then open the Services menu, you'll see only services related to working with images. Select text, and you'll see only text services. Those relevant services

are also organized by function (Files And Folders, Messaging, and so on), making the menu much easier to scan.

Snow Leopard's services were also supposed to appear on the contextual menus that pop up when you Control-click (or right-click) on a selection. Unfortunately, that feature wasn't working in the initial release; perhaps it'll appear in an update.

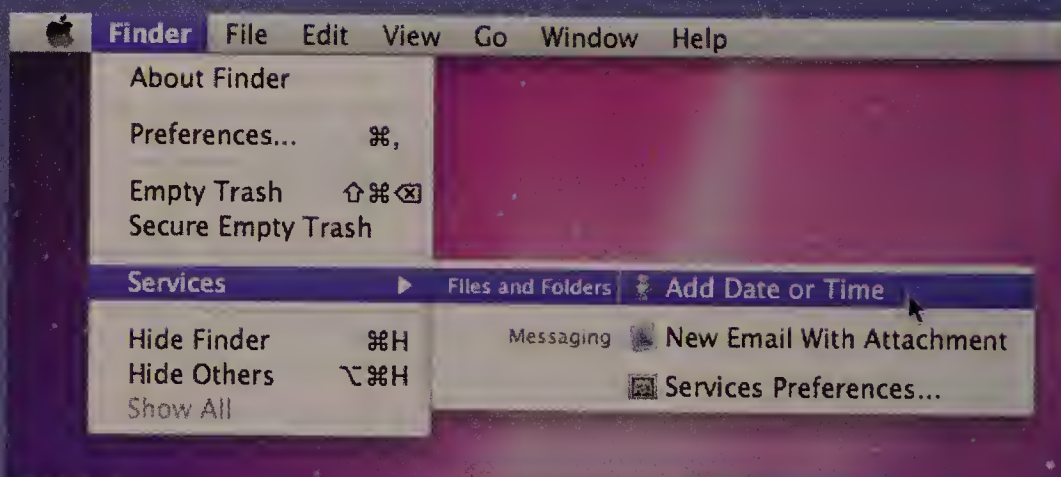
Build Your Own

There is one more change in Snow Leopard—and I think it's the best: You can now create your own services.

As you know, Automator enables you to create small workflows to help with repetitive tasks. In Snow Leopard, you can save workflows as services, which are then available anywhere services are. You could, for example, create a workflow that makes changes to selected photos, then access it from the Services menu in iPhoto. With a bit of work in Automator, you could create services to do your bidding in many common applications.

There are online tutorials on creating your own services (macworld.com/5285). You can also expect to be able to download new services (see, for example, macworld.com/5286).

Given how easy it is to create services, I think we'll see an explosion in creative new ways to tackle repetitive tasks. Factor in the improved accessibility and manageability of services, and I think Snow Leopard is the first OS X release that will make services accessible to everyone. If you've never used services, Snow Leopard could be a good excuse to start.



Clearer Services Menus In Leopard, the Services menu was a mishmash of not-always-relevant options; in Snow Leopard, you see only services that pertain to what you're doing.



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IS SNOW LEOPARD REALLY FASTER?

Macworld Lab tests to see if Apple's speed claims are true **By James Galbraith**

Apple says that Snow Leopard is a top-to-bottom refinement of OS X features. One big goal of those enhancements is improved performance.

To check those performance claims, we tested Snow Leopard on three different systems: a 2.66GHz 20-inch iMac Core 2 Duo, with 2GB of RAM (🔧🔧🔧; macworld.com/4492); a 3GHz Xeon 5300 eight-core Mac Pro (🔧🔧🔧; macworld.com/3008), with 4GB of RAM; and a 2.8GHz 15-inch

MacBook Pro Core 2 Duo (🔧🔧🔧; macworld.com/5053), with 4GB of RAM. We partitioned their hard drives into two equal sizes and then installed Leopard (Mac OS X 10.5.8) on one partition and Snow Leopard (Mac OS X 10.6) on the other. We booted into one OS, timed different tasks, and then rebooted into the other OS and clocked those same tasks.

We concluded that even though some of Snow Leopard's potential performance

gains won't show up until software developers optimize their applications for the new OS's under-the-hood improvements (see "Under-the-Hood Additions," next page), some gains are apparent right now.

WHAT'S FASTER

Of our 16 tests, eight ran faster under Snow Leopard than under Leopard. For example, an initial Time Machine

SNOW LEOPARD VERSUS LEOPARD

	iMAC/2.66GHZ			MACBOOK PRO/2.8GHZ			MAC PRO/3GHZ (8-CORE)			AVERAGE
	Leopard	Snow Leopard	Snow Leopard faster by	Leopard	Snow Leopard	Snow Leopard faster by	Leopard	Snow Leopard	Snow Leopard faster by	Snow Leopard faster by
Startup	31	29	6%	29	29	0%	31	31	0%	2%
Shutdown	7	4	43%	6	3	50%	7	4	43%	45%
Wake up	20	21	-5%	21	24	-14%	11	12	-9%	-9%
JAVASCRIPT										
Safari: JavaScript	631	413	34%	569	405	29%	543	356	34%	33%
BUILT-IN APPS										
Finder: Duplicate a File	33	36	-9%	36	38	-6%	32	35	-9%	-8%
Finder: Zip 2GB Folder	247	231	6%	237	218	8%	229	203	11%	9%
Finder: Unzip 2GB Folder	75	78	-4%	83	78	6%	67	61	9%	4%
Preview: Scroll through a PDF	69	66	4%	75	73	3%	65	62	5%	4%
Time Machine: Initial Backup	2470	1632	34%	2668	2034	24%	2300	1428	38%	32%
OTHER APPS										
Compressor: Encode.mov	570	561	2%	547	536	2%	487	465	5%	3%
iMovie: Export Project	99	96	3%	98	104	-6%	107	107	0%	-1%
iMovie: Import Camera Archive	160	164	-3%	153	108	29%	92	90	2%	10%
iPhoto: Import Photos	51	47	8%	44	39	11%	57	45	21%	13%
iTunes: Rip CDs to MP3s	127	106	17%	164	158	4%	83	88	-6%	5%
Pages: Open Large Word Doc	106	104	2%	103	101	2%	102	97	5%	3%
Photoshop CS4: Suite	43	43	0%	47	45	4%	46	46	0%	1%

All times are in seconds, except for the JavaScript test, which is in milliseconds. —MACWORLD LAB TESTING BY JAMES GALBRAITH AND CHRIS HOLT

backup to an external hard drive was, on average, 32 percent faster in Snow Leopard than in Leopard.

Snow Leopard was also faster than Leopard shutting down, encoding a .mov file in Compressor, zipping a 2GB folder in the Finder, importing 150 photos into iPhoto, scrolling through a large PDF in Preview, and opening a big document in Pages. Safari's JavaScript performance in Snow Leopard increased by an average of 33 percent—but those results are measured in milliseconds.

WHAT'S NOT FASTER

Two tests—starting up and running a test script in Photoshop—showed virtually no performance difference between the two operating systems. Two other tests—duplicating a 1GB file in the Finder and waking from sleep—actually took longer in Snow Leopard than in Leopard.

MIXED RESULTS

The four remaining tests produced mixed results: Snow Leopard was sometimes faster and sometimes slower, depending on the machine.

Unzipping a compressed file in the Finder and importing a camera archive into iMovie in Snow Leopard was slower on the iMac, but faster on the MacBook Pro and Mac Pro. Exporting a project from iMovie using that application's iTunes: Mobile preset in Snow Leopard was faster on the iMac, slower on the MacBook Pro, and exactly the same on the Mac Pro. Converting two CDs' worth of AAC-encoded song files to 256 kbps MP3s in iTunes took considerably less time using Snow Leopard on the iMac and the MacBook Pro, but longer when running Snow Leopard on the Mac Pro.

MORE TO COME

Apple will continue to fine-tune Snow Leopard, and third-party application developers will optimize their software to take advantage of it. As those technologies evolve, we'll continue to assess Apple's performance claims for Snow Leopard.

James Galbraith is Macworld's lab director.

UNDER-THE-HOOD ADDITIONS: WHAT THEY MEAN TO YOU

By **JASON SNELL** Snow Leopard features several new under-the-hood technologies that you might think are of interest to programmers only. But three of those additions—64-bit computing, Grand Central Dispatch, and OpenCL—will in fact benefit you, if not immediately, then in the not-too-distant future. Here's how they work and how they'll change your Mac experience.



64-Bit Computing

These days, every Mac is powered by a 64-bit CPU (from Intel's Core 2 Duo and Xeon lines). That's why Snow Leopard's 64-bit support is relevant to all of us: Just about every program and subsystem in OS X runs in 64-bit mode. And that's a good thing for two reasons.

First, you need a 64-bit OS if you want programs to have access to more than 4GB of RAM. Snow Leopard can address a staggering 16 exabytes of RAM. We won't have computers with that much hard-drive storage, let alone RAM, for a while. But 64-bit computing gives future Macs plenty of breathing room.

The 64-bit mode can improve performance even without terabytes of RAM. Intel processors have built-in math routines that can run more efficiently in 64-bit mode, by processing tasks in fewer steps. (That could help explain why our JavaScript testing showed such a marked improvement.)



Grand Central Dispatch

Manufacturers once made computer chips faster every year by increasing their clock speeds. But then the microprocessor industry ran into some fundamental physical limits to those speeds. That's why chip makers started making CPUs with multiple processor cores.

Multiple cores can process data more efficiently than single cores—if software is rewritten to take advantage of them. But such rewrites are not trivial. As a result, many programs still don't take full

advantage of multicore processors.

Snow Leopard's Grand Central Dispatch is a collection of tools for programmers that should make those rewrites easier. Simply put, Snow Leopard lets programmers define different parts of their programs as blocks, and then feed those blocks to Grand Central Dispatch. Snow Leopard then manages the processing of those blocks for maximum efficiency; the individual apps don't have to do it themselves.

That doesn't mean the current versions of your apps will suddenly become blazingly fast. But the next versions could be.



OpenCL

When you think of a Mac's processing power, you probably think of its CPU—in recent Macs, that means an Intel Core 2 Duo or a Xeon. But most Macs have another chip with plenty of processing power: the graphics processing unit (GPU), which accelerates graphics.

Snow Leopard's new OpenCL technology allows programmers to tap into the GPU's extra processing power. Programmers who use OpenCL will be able to give GPUs work to do, even for programs that have nothing to do with graphics. Today's generation of GPUs, in particular, are good at massive operations involving lots of data (such as games). Future generations will likely be adept at a wider range of computing tasks, making them even more useful as computational resources.

Note, however, that OpenCL will work only with certain graphics cards. Among those that are OpenCL-friendly and used in contemporary Macs are nVidia's GeForce GT 120, GT 130, 9400M, and 9600M GT; and the ATI Radeon 4850.

What's In It for You?

You may not be aware that these three technologies are bubbling under the surface of Snow Leopard. But the people who write Mac software (including Apple's own programmers) are quite aware of them. And as they exploit them, all you need to know is that your Mac and your apps are running faster.

INSTALLING SNOW LEOPARD: WHAT YOU NEED TO KNOW

Fewer options make for simpler installation **By Dan Frakes**

With Snow Leopard, Apple has streamlined and simplified the process of installing Mac OS X. Older versions of OS X made you decide *what kind* of installation you wanted to perform before you even specified *what* to install. Those options are gone or hidden in Snow Leopard.

Gone, for example, is the old Clean Install option—which moved your existing OS and system add-ons to a Previous Systems folder and installed a fresh copy of the OS, requiring a good amount of tweaking and transferring of files afterward. The Erase And Install option is gone, too, though it's possible to replicate it.

Instead, Snow Leopard's installer gives you a single installation path, which makes the process considerably easier.

BEFORE YOU BEGIN

According to Apple, to install Snow Leopard, you must have a Mac with an Intel processor, a DVD drive (or Leopard's Remote Disc feature), a minimum of 1GB

of RAM, and 5GB of free hard-drive space (7GB if you plan to install the Snow Leopard developer tools). Those are just the official requirements. I'd recommend 2GB of RAM and at least 10GB of free hard-drive space.

It's also worth checking to see if your Mac needs any firmware updates. Similarly, if you've installed an aftermarket video card in your Mac, be sure to check with the card's vendor to see if there are new Snow Leopard-compatible drivers you need to download and install.

Let me also suggest that a major OS upgrade is the perfect chance to check your drives for problems, clean house, and check for updates for your frequently used software. (Don't forget to check for new versions of preference panes and other add-ons that run in the background.) Also, as with any major software update or upgrade, you should be sure to back up before installing Snow Leopard.

Of course, you'll also need to get Snow Leopard itself. The \$29 retail Snow

Leopard upgrade disc—or the \$10 upgrade disc available if you purchased a Mac on or after June 8, 2009—is for users who already have a license for Leopard (Mac OS X 10.5). Intel Macs running Tiger (Mac OS X 10.4) must buy the \$169 Mac Box Set, which includes a full version of Snow Leopard bundled with the latest versions of iLife and iWork. For more on that, see the Snow Leopard review on page 34.

SIMPLE STEPS, EASY DECISIONS

When you insert the Snow Leopard DVD and double-click the Install Mac OS X icon, you aren't immediately prompted to restart as you would have been in previous OS X installers. Instead, after you accept the license agreement and choose the target hard drive (if you have only one disk, it's selected by default), you can click Customize to select from a slew of installation options:

Printer Support It's much easier to select which printer drivers to install. The installer automatically figures out the printer models you've previously used and installs drivers for them. By default, it also installs drivers for printers it detects on your local network, as well as ones for printers Apple deems popular—commonly owned printers from major manufacturers.

With those drivers installed, you should be able to use most printers you come across. If you regularly use many different printers, you can select the checkbox for All Available Printers, which installs every printer driver on the OS X DVD.

But even that may not be necessary, because Snow Leopard can download and install printer drivers on the fly.

Additional Fonts The Additional Fonts option lets you install fonts for Arabic,



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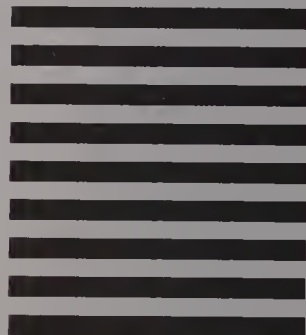
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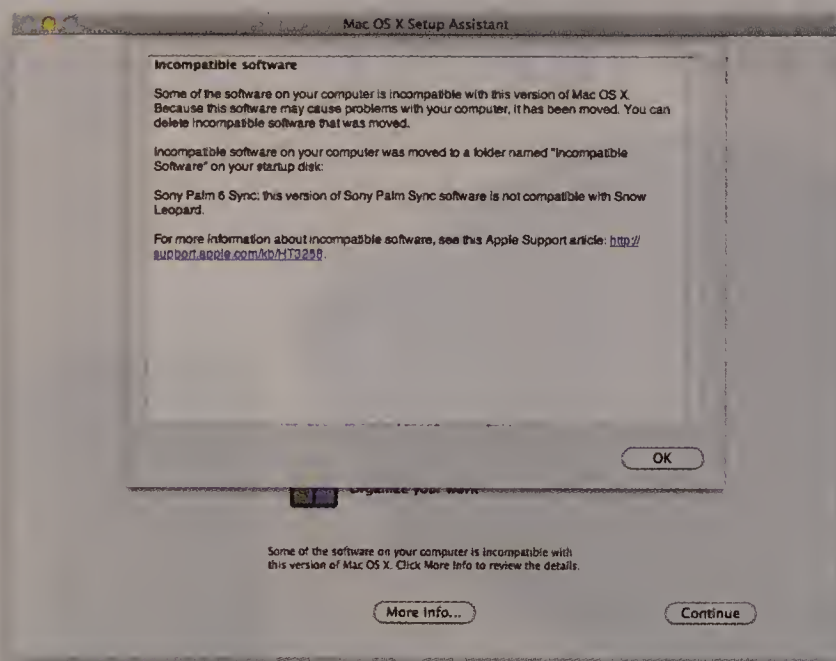
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Incompatible Software The Snow Leopard installer can detect when you have software on your system that will conflict with the new OS.

Armenian, Cherokee, Chinese, Cyrillic, Devanagari, Gujarati, Hebrew, Inuktitut, Korean, Punjabi, Thai, and Tibetan. You can't choose a subset of those fonts, but the whole package is small enough (40MB to 120MB, depending on the fonts

languages are available through the Language Translations option. You can disable it to save a few hundred megabytes. You can also opt out of specific language translations; click the disclosure triangle to reveal the indi-

vidual languages, and then check only the languages you'll actually use. **X11** If you need X11 (the windowing system that gives you a graphical user interface for some Unix programs), chances are you'll know it. The installation is only 64MB, though, so you might want to install it just in case. **Rosetta** Disabled by default, Rosetta lets you run many PowerPC applications on Intel Macs. If you have older Mac software that never made the jump to Intel code, you should install Rosetta.

Language Translations Support files that let you view menus, dialog boxes, and other OS-related text in other

QuickTime 7 Snow Leopard includes a new version of QuickTime that purports to offer many improvements on QuickTime 7. (See this month's *Playlist*, page 72.) However, that new version—QuickTime Player X—may not support some media formats that QuickTime 7 did. (For details, see Apple's support article at macworld.com/5265.) Selecting the option to install QuickTime 7 will give you backward compatibility. (If your Mac has an active license for

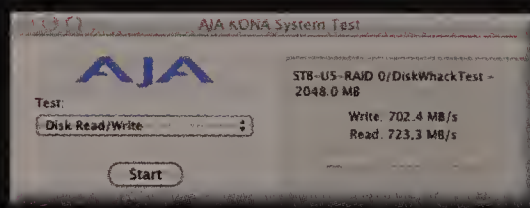
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QuickTime Pro 7, this option will be enabled by default.)

Don't spend too much time worrying about which of these options to install: unlike Leopard and earlier OS versions, Snow Leopard can automatically download and install some software on demand. For example, if you didn't choose the All Available Printers option and you later try to use a printer for which you don't have a driver, OS X will connect to the Internet and download the software you need. Similarly, if you didn't install Rosetta or QuickTime 7, and you later try to open a program or media file that requires them, OS X will offer to download and install it on the fly.

Also, if you forget to install something the first time, or if you want to reinstall an application, you can do so from the Snow Leopard DVD by double-clicking the 'Optional Installs.mpkg' package

inside the Optional Installs folder. After the installer launches and checks your drive for Snow Leopard, you can choose to install Rosetta, QuickTime 7, fonts, printer drivers, language support, iPod support files, X11, or any of the stock OS X apps (Address Book, iCal, iChat, iTunes, Mail, Dictionary, or Safari).

After choosing your options, click OK and then click Install, verify that you want to install, and enter an administrator username and password. The installation will begin immediately—the computer doesn't need to restart first. Your next interaction with your Mac should be when it reboots

with Snow Leopard successfully installed. (You might have to pair Bluetooth input devices again before rebooting.)

If you've set up your Mac so it can boot into Windows via Boot Camp, you'll need to use the Snow Leopard DVD to update your Windows drivers.

Instead of proceeding with the installation as outlined above, you might first want to check, repair, or even erase your hard drive, or use other utilities from the Install DVD. If that's the case, click the Utilities button and follow the instructions to boot from the Install DVD.

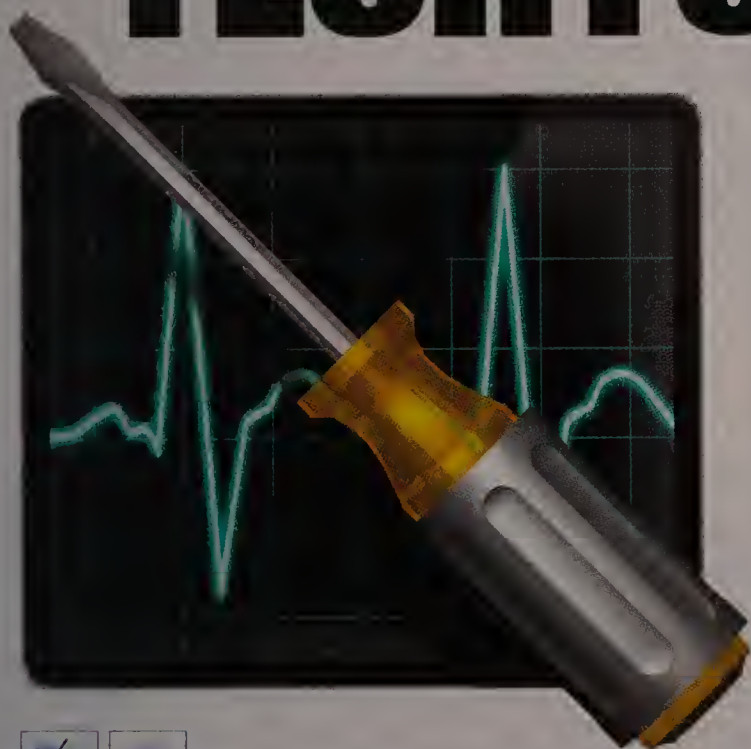
For example, to erase the hard drive before installing, choose Utilities ► Disk Utility from the first Installer screen after rebooting, and then manually erase the drive; you can then exit Disk Utility and proceed with the installation. (For more on why you might want to go this route, see "Why Erase and Install?" page 53.)

FASTER AND SMARTER

Apple claims that Snow Leopard installs "up to 1.45X faster" than Leopard. Installing Snow Leopard on my 2009 Mac mini took just under 29 minutes from the time I provided my username and password



TECHTOOL PRO 5

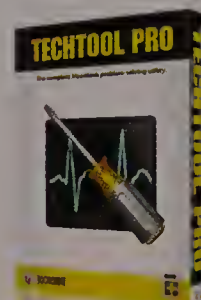


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to the post-install restart—noticeably faster than installing Leopard on the same machine.

Apple also claims that installing Snow Leopard on a Mac running Leopard will free up “about 6GB” of hard-drive space. You’ll see that gain only if you installed a full version of Leopard, including *all* printer drivers. My testing on a 2009 MacBook Air that had only a subset of Leopard’s printer drivers gained just under 2GB of free space.

The Snow Leopard installer is smart about ferreting out possible software conflicts. For example, it disables most input managers, kernel extensions, and Mail plug-ins that are known to be incompatible with Snow Leopard or to cause problems.

Some of these items, such as input managers and contextual-menu plug-ins, remain in place but aren’t loaded, because Snow Leopard no longer supports the mechanisms by which they function. Others—incompatible kernel extensions, for example—are actively

relocated. If you have any such items installed, you’ll see a dialog box, near the end of the installation process, telling you these files have been moved to an Incompatible Software folder. You’ll lose the use of these add-ons until the developers update them.

The Snow Leopard installer is also smart about interruptions. If your Mac loses power as you’re installing, or if an installation is otherwise interrupted, you can simply start over without having to worry that your drive or the OS has been left in a nonfunctional state; installation will pick up where it left off.

REMOTE DISC

Snow Leopard is the first upgrade to Mac OS X that comes only on a disc since the MacBook Air made its debut. For many MacBook Air owners, that means Snow Leopard is their first occasion to use Remote Disc (Apple’s technology for using the optical drive of one Mac to install software on another Mac). You can, in fact, use Remote Disc

to install Snow Leopard on any Mac currently running Mac OS X 10.4.10 or later. Here’s how:

First, make sure both Macs are on, awake, and connected to your local network. On the computer that is *sharing* the Snow Leopard disc (it must be running OS X 10.4.10 or later), open the Sharing system preference and enable DVD Or CD Sharing. (If the hosting computer is running OS X 10.4.10 through 10.5.2, you’ll first need to install DVD Sharing.)

Next, on the computer on which you’re installing Snow Leopard, open a new Finder window and select Remote Disk in the sidebar; the computer sharing the disc should appear to the right. Double-click the computer sharing the disc; you’ll see a Connected message, and the Mac OS X Install DVD will appear. Double-click the Install DVD icon and then the Install Mac OS X icon.

From here, the installation should proceed as described above, albeit more slowly: Installing Snow Leopard onto a 2009 MacBook Air from a 2009 Mac mini over an 802.11n network—with the

SYSTEM PREFERENCES GETS RESHUFFLED

By **DAN FRAKES**

In every major upgrade to Mac OS X, Apple renovates System Preferences. In Snow Leopard, that means individual panes have been reorganized and some settings moved. Here are some of the more notable changes.

Appearance You can no longer specify a font-smoothing style (Leopard let you choose from Automatic, Standard, Light, Medium, and Strong); you can choose only whether to use the feature and the font size at which it kicks in.

Date & Time You now have the option of showing the date in the menu bar. Unfortunately, you can’t customize that date’s format; you’re stuck with Sep 28, for example.

Dock You can now opt to minimize windows into their parent applications’ Dock icons.

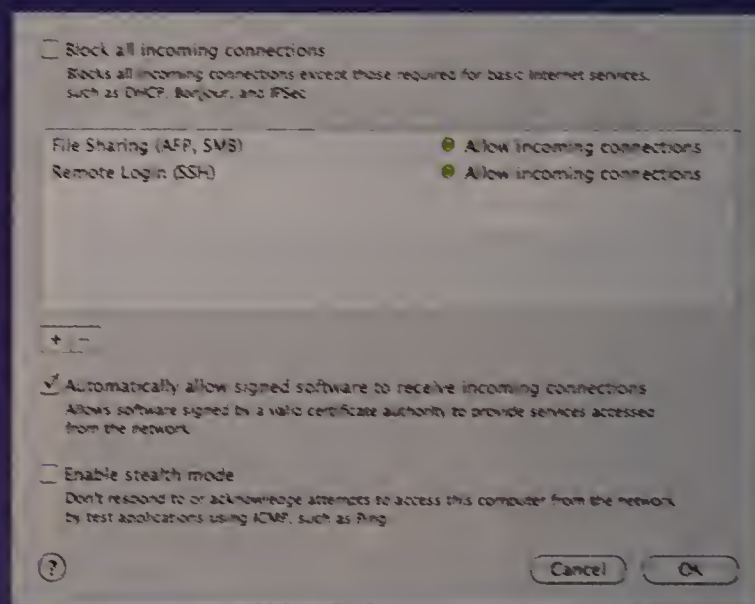
Keyboard and Mouse Formerly combined in one preference pane, Keyboard and Mouse are now separate panes.

More significantly, the Keyboard

Shortcuts tab has been redesigned for the better. Shortcuts are grouped by category (Dashboard & Dock, Screen Shots, and so forth) on the left; select a category and the relevant shortcuts are displayed on the right. You can also temporarily disable individual shortcuts.

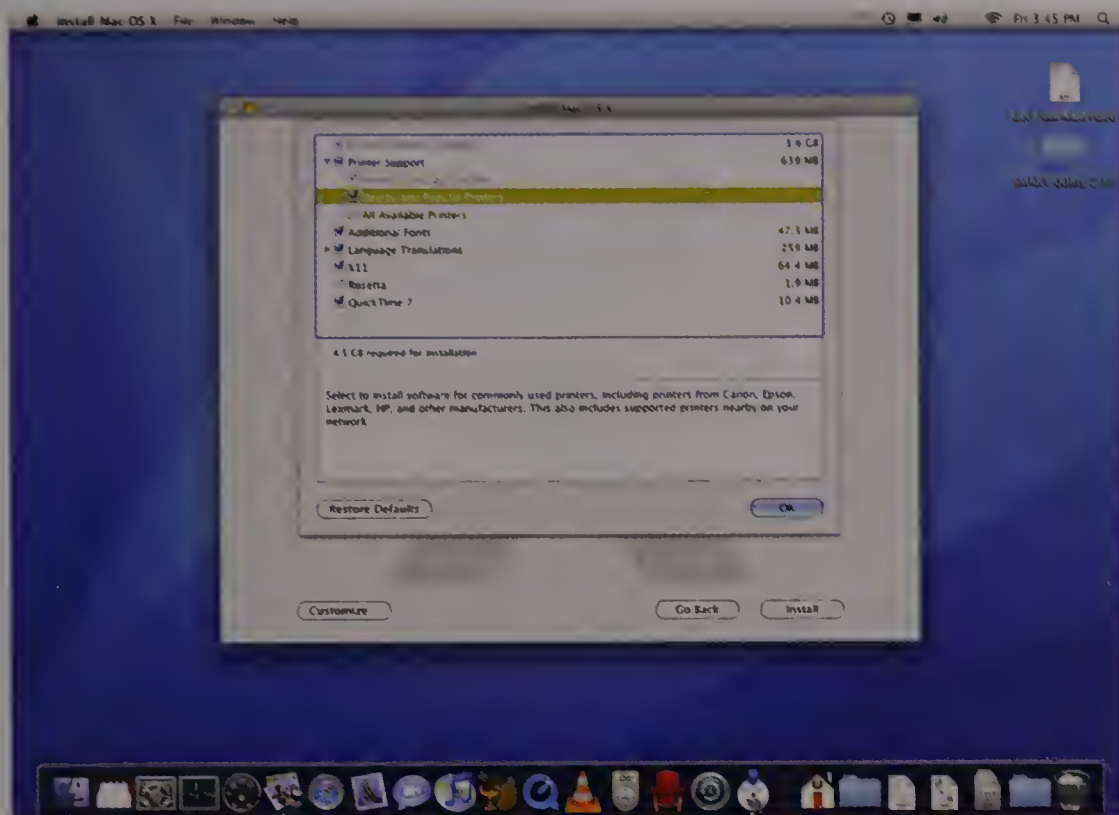
The other big change in the Keyboard Shortcuts tab is the inclusion of Services as one of these categories. See “Services That Make Sense (Finally!),” page 44.

Language & Text Previously known as the International pane, the Language & Text pane has a Text tab that offers a significant new feature: symbol and text substitutions. Similar to the functionality of Microsoft Office’s AutoCorrect and utilities such as



Security The OS X firewall interface has changed: After turning it on or off, you configure it on this Advanced pane.

TextExpander (macworld.com/5274/) and Typelt4Me (macworld.com/5274/), substitutions will automatically replace one text string with another as you type. Tip: When you’re adding your own substitutions, you can paste text from the Clipboard instead of typing it. Also, pressing Option-Return—instead of just Return—inserts a line break.



Customized Installation After you click the Customize button on the main Install window, you can select several installation options, including printer drivers, fonts, and languages.

Nearby And Popular Printers, Additional Fonts, X11, Rosetta, and QuickTime 7 options enabled—took me just over 56 minutes.

WHY ERASE AND INSTALL?

If the new installer is so good, why would you want to erase your drive first—a process equivalent to the old

Erase And Install option? One reason might be that the standard installation procedure produced problems. Or maybe your Mac has been buggy under Leopard. Erasing your drive before installing Snow Leopard could fix these kinds of problems.

After installing Snow Leopard this way, you'll be asked if you want to transfer applications and data from your backup. If you choose to restore everything, you'll end up essentially where you would have been if you'd used the standard installation procedure. (Under Leopard and earlier OS X installers, using Erase And Install and then restoring your data using Migration Assistant would often fail to transfer over *all* your data; specifically, some settings and add-ons would be left behind.)

INSTALL AWAY

Snow Leopard appears to be the easiest, and smartest, Mac OS X installation yet. Just be sure to perform a full backup beforehand; as long as you have that, you should be all set.

MobileMe OS X now has a new sync option: Always Keep The Most Recent Version Of A File. With this option selected, if you work on one iDisk-hosted file from multiple computers, only the newest version will be kept when you sync.

QuickTime The QuickTime pane is gone. See *Playlist*, page 72, for more about this.

Security The Security preference pane has undergone some big changes from Leopard to Snow Leopard.

For starters, if you opt to require a password when waking the computer from sleep or the screensaver, you can now specify a time delay (5 seconds; 1, 5, or 15 minutes; or 1 or 4 hours) before that password is necessary. You can also disable Snow Leopard's new Location Services, and reset warnings and permissions for applications.

Finally, the firewall settings have been revamped considerably. The main firewall tab provides a simple On/Off setting; to configure the firewall, you click the Advanced button. Your options now include blocking all incoming connections, automatically allowing connections to signed software

(those with a valid certificate authority), enabling stealth mode, and configuring individual firewall rules. Leopard's option to enable and view firewall logs is gone.

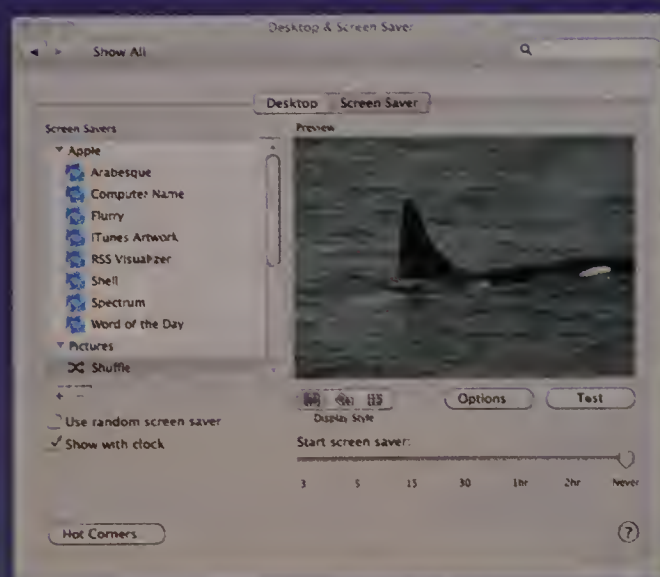
Sharing First, there's a new Scanner Sharing entry for sharing a USB-connected scanner with other computers in your network; in Leopard, this feature was hidden in the Image Capture application. Second, the

Printer Sharing screen has gained the same access-control interface as File Sharing, letting you choose—by user and by printer—who can print to which printers.

Trackpad On older Mac laptops with Multi-Touch-capable trackpads, this pane adds settings for the new four-finger Multi-Touch gestures. (In this initial release of Snow Leopard, these gestures have some glitches.)

Universal Access This pane now allows you to convert stereo audio to mono; the resulting mono audio is played through both channels—a boon for the hearing impaired.

System Preferences Finally, System Preferences itself is now a 64-bit application. You can still install and use many 32-bit preference panes. But whenever you access one of them, System Preferences will prompt you to quit it so it can relaunch in 32-bit mode. (Likewise, if you then want to access a 64-bit pane, System Preferences will need to quit and relaunch in 64-bit mode.)



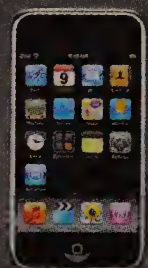
Screensavers Another nice addition: You can set your screensaver to shuffle images.

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by Richard Thalheimer

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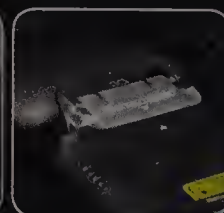
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ONLINE Backup Services



REVIEWED: 7 Web services that let you back up files and restore them from anywhere

By Glenn Fleishman

Backups work best when you have multiple copies, at least one of which is both current and off-site. OS X's Time Machine feature, plus the availability of high-capacity, low-cost hard drives, make it possible for you to back up regularly and rotate drives through backup sets, storing a full backup safely away from the source data.

But what about when the worst happens? When fire strikes, a lightning bolt fries your computers and backup drives, or a burglar makes off with the goods? A drive stored off-site helps—but the files stored on it are

out of date the second you unplug it and haul it away. An online backup service can be the perfect addition to your backup plan.

With large amounts of storage available at a low cost or even for free, and with today's fast Internet connections, backing up your files online has become more viable. Online backup providers also add depth to your archives, since most of them store data in such a way that you can retrieve several—or even several hundred—previous versions of a modified file.

Here's a look at seven services with Mac software for managing automated backups.

How They Work

All the hosted backup services we looked at use Mac software to synchronize data on one or more of your computers with their hard drives and services elsewhere on the Internet. All support OS X 10.4, 10.5, and 10.6 (all except for Carbonite, which supports just 10.4 and 10.5). All support Windows, and some support Linux.

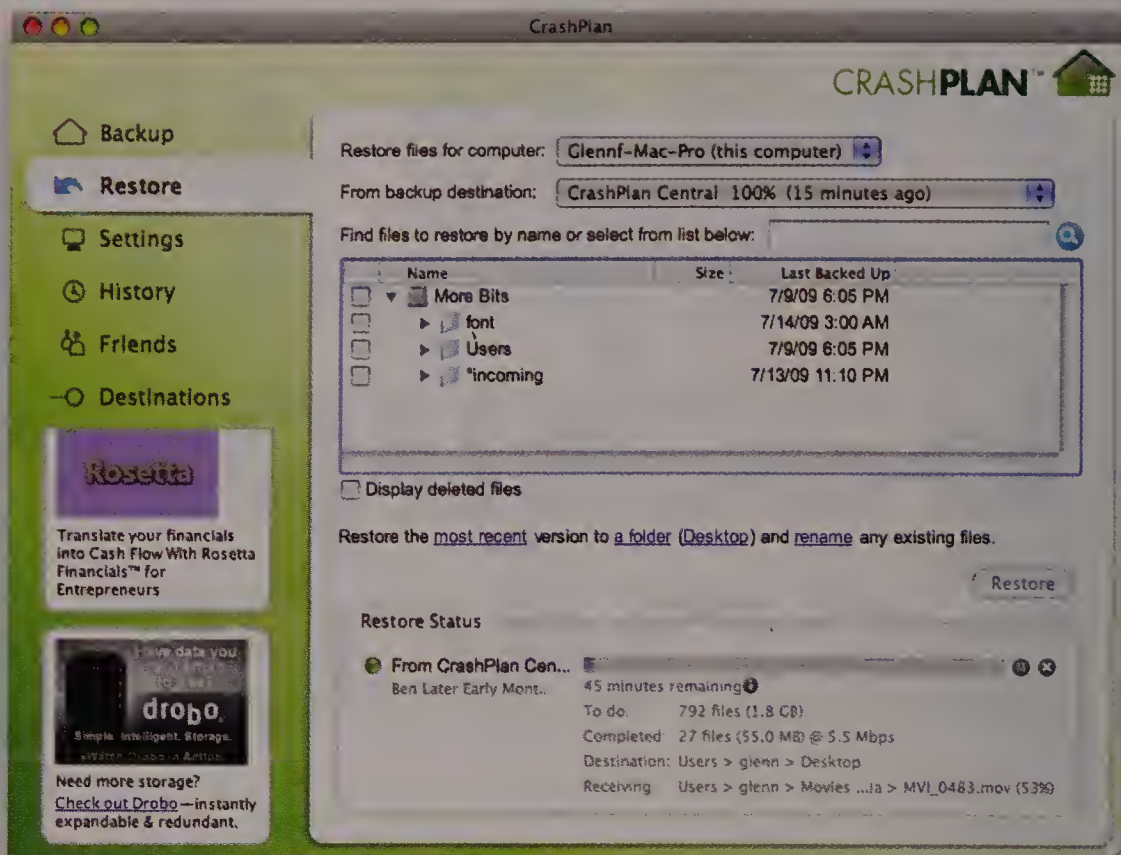
Your initial backup requires that you upload every byte of data. Only one service, CrashPlan Central, lets you jump-start that process by loading a drive it sends you with up to 1TB of data (\$125 for ground or \$145 for two-day shipping, prepaid both ways).

The services store your data on massive server farms that might have hundreds or thousands of terabytes of storage capacity. Companies provide few details about where and how they store data. Jungle Disk is unique in relying on cloud-based metered storage, offering a choice between parent company Rackspace and Amazon's Simple Storage Service (\$3).

After the initial backup, all the services are cleverly efficient about sending changes. Rather than re-uploading a 10MB file—or even a 10KB one—the software on your computer breaks a file into pieces, and then creates a mathematical summary of each piece. The program compares the summary to what's stored on the server and then transfers only changed or new pieces.

How We Tested

Testing seven online backup services isn't for the fainthearted. Using a Comcast Internet connection that had listed rates of 15 mbps downstream and 2 mbps upstream but frequently provided far higher rates, we installed each package and selected at least 10GB of files for backup (and up to 100GB in some cases). We used the services for a few weeks (in the case of CrashPlan Central and MozyHome, I had been using them for months and years, respectively). We examined large current backup sets and performed other tests, including restoring backed-up files.



CrashPlan Central With competitive pricing, easy-to-use Mac software, and access to multiple destinations integrated in one package, CrashPlan Central is a great option.

That process also allows you to reconstruct an older version of a file using a base file, with any subsequent changes patched on top, to reach the version you want. These piecemeal updates are also typically compressed to make the upload even faster.

Most of the services let you specify that deleted files be removed immediately from the backup set or retained as part of stored older versions, forever or for a certain number of days.

Every service has its limitations regarding how it finds, packages,

encrypts, compresses, uploads, and receives changed files. When we tested each service on a cable Internet connection that regularly tops 5 mbps upstream, each was able to store several gigabytes overnight.

Pricing

Backup service providers follow one of two pricing schemes: flat-rate storage or per-gigabyte (metered) storage. Only Jungle Disk and SpiderOak are metered.

Flat-rate services charge a set rate per computer and includes unlimited

Backblaze



PROS: Easy to get started; bandwidth test shows how much data you can back up per day at the current rate.

CONS: Won't let you schedule an end time for backups; complex exclusion process.

PRICE: Unlimited storage, \$5 per month, per computer

COMPANY: Backblaze, www.backblaze.com



Carbonite



CARBONITE

PROS: Performs basic backup and restore operations.

CONS: Limited throttle control; no scheduling option; is missing features included in the Windows version of the software (the company says it plans to add them in the future); lack of storage of older versions of files.

PRICE: 15-day trial, free; unlimited storage, \$55 per year, per computer

COMPANY: Carbonite, www.carbonite.com

storage, while metered services allow an unlimited number of computers access to a pool of data. iDrive is an exception—it offers 150GB of storage for up to five computers for a flat monthly rate.

The flat-rate providers typically charge about \$5 per computer on a monthly basis, although several allow advance payment for a year or more at a time, or offer a discounted yearly option.

CrashPlan Central offers a \$100-a-year rate for an unlimited number of computers storing an unlimited quantity of data. This rate is cheaper for two computers than those of all its flat-rate competitors, and it's vastly cheaper for more than two.

Jungle Disk charges \$2 per month for using its software, and it passes along online storage costs. Jungle Disk's parent company, Rackspace, charges 15 cents per gigabyte of storage per month, as does Amazon S3. Amazon charges additional fees for data transfers in and out, as well as for requests. (See Amazon's S3 page at aws.amazon.com/s3 for details.)

SpiderOak charges a flat rate of \$10 per month, or \$100 per year, per 100GB of storage.

Selecting and Excluding Files

The biggest difference among all the hosted backup services is in how you select files. The most obvious starting point is the ability to select hard drives and flash drives. All of the services but Carbonite let you select any locally connected drive.

Several services also let you back up any network-mounted volume that's available



iDrive Like a few other services we tested, iDrive lets you mount your backed-up data as a server in the Finder. Its interface, however, is cluttered and confusing.

via the desktop. Apart from CrashPlan Central, the flat-rate services won't let you back up such volumes; iDrive, Jungle Disk, and SpiderOak allow it, although the latter two require that you navigate to the /Volumes directory to reach those drives.

The idiosyncrasies of each service really surface when it comes to choosing files to back up. Backblaze lets you select only drives, and relies on an exclusion setup to remove items from the backup. By contrast, Jungle Disk has extraordinarily finely detailed settings and choices for both selection and exclusion. Several packages

let you avoid backing up files above a certain size, too, which would let you exclude large files, such as movies and virtual disk images. Jungle Disk also lets you select files by wildcards and file type.

MozyHome appears to be unique in using Spotlight for both preset selection options (such as all your applications' preferences) and new selections based on a Spotlight search.

Excluding files is a tedious process in most programs. Almost all the software we looked at uses a hierarchical selection method in which you choose a folder and

CrashPlan Central



PROS: Good pricing; easy to use; multiple destinations (hosted, local, peer-to-peer) integrated in one package.

CONS: Omission of multiple-backup-set selection is mystifying, given multiple-destination approach.

PRICE: 30-day trial, free; unlimited storage, \$54 per year for one computer or \$100 per year for two or more computers

COMPANY: CrashPlan, www.crashplan.com

iDrive



PROS: Finder-mountable drive.

CONS: Confusing interface; poor scheduling tool.

PRICE: 2GB, free; 150GB, \$5 per month or \$50 per year for up to five computers

COMPANY: Pro Softnet, www.idrive.com

Jungle Disk

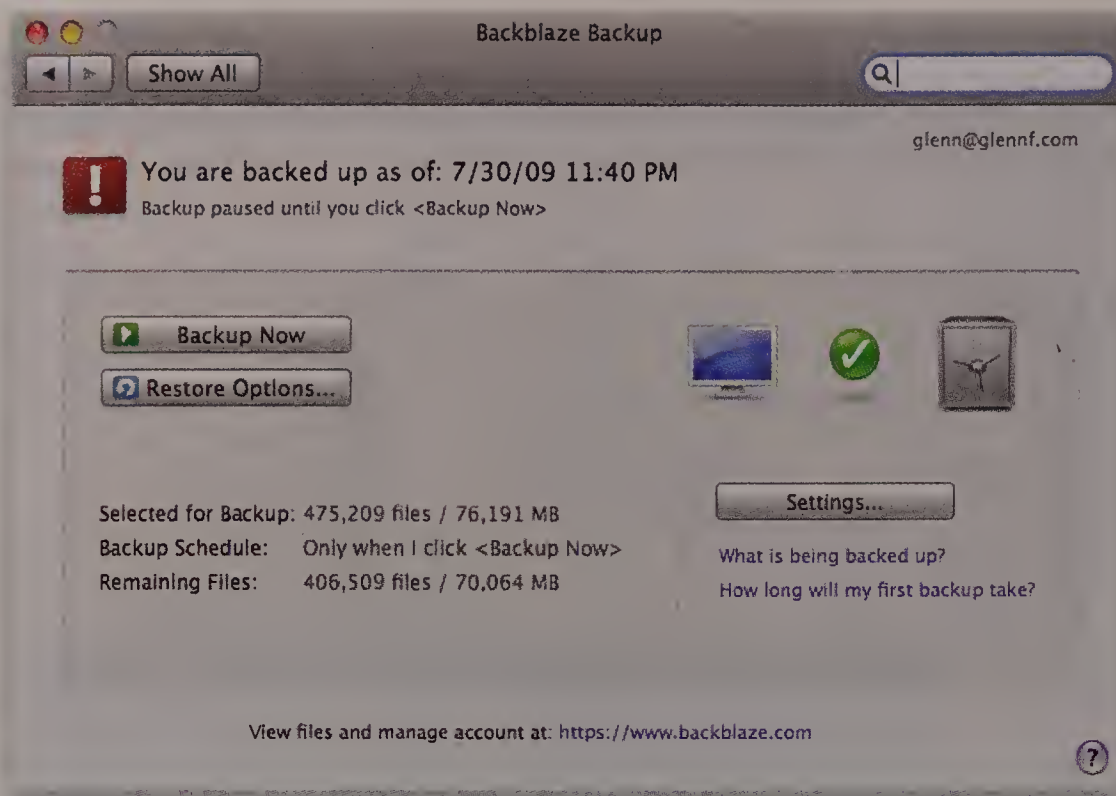


PROS: Fine-grained selection and exclusion options; multiple backup sets for multiple volumes; Finder-mountable volumes.

CONS: Plethora of options can be confusing; metered cost for every action in S3.

PRICE: \$2 per month, plus 15 cents per GB per month for storage; additional transfer fees for S3

COMPANY: Jungle Disk, jungledisk.com



Backblaze It's very easy to get started with Backblaze, but the program suffers from a complicated process for excluding files and a lack of complete scheduling capabilities.

all nested folders; some use a Mac convention of triangles that you click on to expand or collapse a nested item, while others rely on plus (+) and minus (–) signs. To exclude a nested item in some packages, you must click down several levels, find the item, and uncheck a box next to it.

How Often, How Fast?

Upstream Internet bandwidth is a precious commodity, as is your computer's processing power. The software packages we tested all allow various ways to throttle upstream (and sometimes downstream) bandwidth use, but most have poor controls for scheduling backups.

Most of the software lets you choose some of these parameters: time of day to start making backups, time of day to stop making backups, number of minutes of idle time before starting a backup, amount of processor power to use while backing up, bandwidth limits for upstream traffic, and backup frequency.

Some of the programs start backups when your computer is idle, using the minutes of inactivity and/or the CPU usage as a guideline to determine when to start backing up or go full speed ahead. Some software also lets you set a maximum percentage of CPU usage for the backup program.

First Backup Strategy

Even if you have a 10- to 20-mbps upstream connection, a large data set takes a long time to back up. To get started, consider the *staging method*.

First, create a set of critical data that's under a few gigabytes. Wait until that set is backed up. Next, add gigabytes of data iteratively, sweeping a larger and larger net, adding a new selection only after the previous backup is complete. During that time, the incremental backups will keep your critical files up-to-date.

Finally, include all the files you want. By staging backups, you can be sure that you aren't still backing up initial files weeks into the process.

No two backup packages offer the same options. And unlike desktop software, online backup software other than Jungle Disk doesn't allow you to schedule different sets of backup files—if, for instance, you want to archive a critical set of folders every four hours but upload music and movies only on weekends.

Jungle Disk allows you to set up multiple backup volumes, as well as multiple backup sets and schedules for each volume.

No package lets you set what should be a perfectly common and reasonable schedule: back up outside work hours and on weekends for office systems, and back up during work hours and overnight at home. SpiderOak lets you set days of the week, but the schedule is the same for each and doesn't include a stop time. With Jungle Disk, you could set up multiple identical backup sets with different schedules to achieve the effect.

Carbonite lacks the ability to schedule backups, and Backblaze can't set an end time; neither monitors a Mac for activity. Carbonite automatically throttles back its efforts when the computer is in use, but you can't change its notion of what *in use* is. Both Backblaze and Carbonite can be set to a vague lower-priority mode, too.

MozyHome

PROS: Terrific initial backup selection set; simple approach for basic use.

CONS: Controls and status windows are split into too many pieces; restore software failed on one computer; backup halted for four weeks on one computer due to bugs (fixed in a subsequent release).

PRICE: 2GB, free; unlimited storage, \$5 per month, per computer

COMPANY: Mozy, www.mozy.com

SpiderOak

PROS: None.

CONS: CPU usage with large files made computer unusable, while also preventing restore operations from completing; scheduling option doesn't allow you to set a duration or stop time; pricing is comparatively high compared with most of the other services.

PRICE: 2GB, free; each 100GB, \$10 per month or \$100 per year

COMPANY: SpiderOak, www.spideroak.com

Carbonite's control is simply Lower Priority; Backblaze and SpiderOak at least let you specify network bandwidth. SpiderOak lets you specify only a start time, not a stop time.

Backblaze offers the unique option of testing your connection via its Web site, which then reports the maximum amount of data you could send per day at the current unthrottled rate. In my case it was 13GB. Most services display a status bar or window showing the data's progress and an estimate of the time remaining.

The other services let you set a specific network speed for uploading files; Jungle Disk lets you set the downstream rate as well. CrashPlan Central can halt backups, running only during a specified period, while IDrive and MozyHome allow throttling to a lower bandwidth rate only outside defined backup periods during idle times. You can throttle to a very low rate, but you can't halt backups.

All seven services have room for improvement in scheduling. Filling a broadband pipe during the wrong time, while leaving it empty during idle times, defeats the purpose of Internet backups. Allowing multiple entries to tie backup sets to times of day and throughput speeds would enhance each package.

None of the services can prioritize backups based on a goal size for a month either, which can be an issue given the trend toward bandwidth caps (Comcast already imposes one of 250GB per month). This would likely affect you only for an initial backup, but

tion optional. (No hacker has managed to breach 128-bit SSL/TLS—such a development would affect e-commerce and banking transactions worldwide.)

Backblaze, CrashPlan Central, Jungle Disk, MozyHome, and SpiderOak all offer one more level of protection: you can set

Backup service providers follow one of two pricing schemes: flat-rate storage or per-gigabyte storage.

hosted backups should reflect the current market's limits.

Protecting Backups

Each storage company has various security protocols in its software and on its servers to prevent unauthorized access to your data. All except IDrive and Jungle Disk first encrypt data on your computer using their software, whether it's the first backup of a file or an incremental piece. Most services then use 128-bit SSL/TLS, the same encryption used to transfer data for secure Web transactions. In IDrive's case, the company uses SSL/TLS for transfer, and then encrypts data when it arrives on the server. Jungle Disk uses secure transport, but makes file encryp-

your own password to encrypt files on your computer. The service then has no idea what your password is, and no cracker, government agent, or other party can decrypt your files. Lose this key and, just as with an encryption key for your desktop password, you're hosed. (IDrive plans to add a password option to its Mac software.)

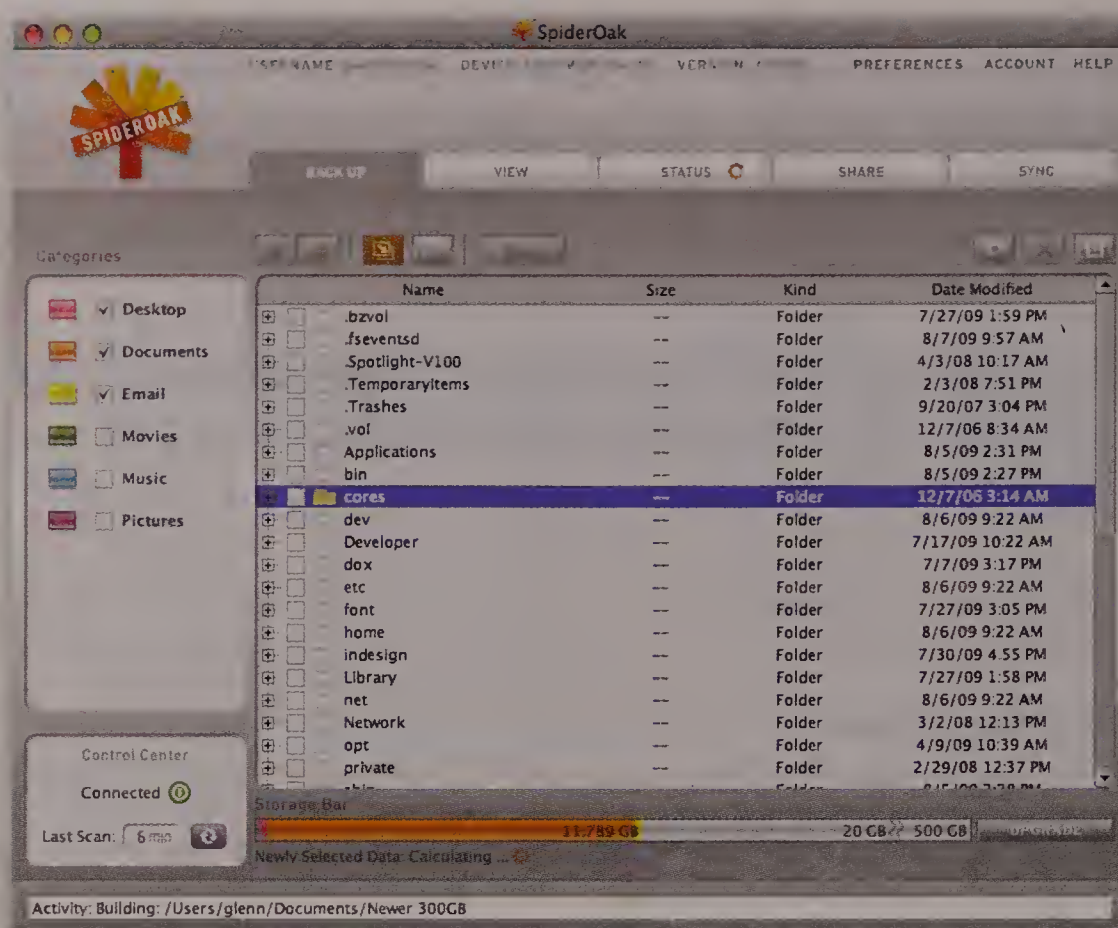
SpiderOak requires that you use your own password; Jungle Disk optionally offers encryption, in which case you must use your own key. CrashPlan Central goes a step further, letting you use not only a password but also a public key, which is ostensibly far more difficult to obtain or crack than a password.

Account passwords remain the weakest link. Someone who obtains your account

Online Backup Services Compared

PRODUCT	FREE STORAGE	PAID STORAGE/AMOUNT	FILE EXCLUSION	MULTIPLE COMPUTERS PER ACCOUNT	VERSIONING	BACK UP NET-WORKED DRIVES	FILE ENCRYPTION	BACKUP SCHEDULING	MOUNT BACKUP FILES AS DESKTOP DRIVES
Backblaze	none	\$5 per month, per computer/unlimited storage	by folder or file type extension	●	●	○	●	●	○
Carbonite	unlimited in 15-day trial	\$55 per year, per computer/unlimited storage	none	●	○	○	●	○	○
CrashPlan Central OUR PICK	unlimited in 30-day trial	\$54 per year for one computer; \$100 per year for two or more computers/unlimited storage	by name or regular expressions pattern	●	●	●	●	●	○
IDrive	2GB	\$5 per month or \$50 per year for up to five computers/150GB	by selection or partial name	●	●	●	○	●	●
Jungle Disk	none	\$2 per month, plus 15 cents per GB per month for storage; additional transfer fees for S3/unlimited storage	many methods	●	●	●	●	●	●
MozyHome	2GB	\$5 per month, per computer/unlimited storage	via Spotlight or by direct selection	●	●	○	●	●	○
SpiderOak	2GB	\$10 per month or \$100 per year per 100GB/unlimited	by file or folder wildcard	●	●	●	●	●	○

● = yes, ○ = no.



SpiderOak A confusing color-coded interface, problems with CPU usage and large files, and limited settings make SpiderOak hard to recommend considering the competition's abilities.

name and password can either download client software or use Web sites or locally mounted drives to retrieve your files.

Recovering Data

When you need to recover data, most services offer several ways to restore a file or a volume. All but Backblaze let you select files via the desktop software. All but IDrive let you pull down files from the Web site when you're logged in to your account;

menu to access versions, and the same is true of MozyHome; CrashPlan Central, by contrast, has an expand triangle next to files that displays each version by date.

Downstream rates seemed to be constrained more by the amount of time a service took to piece together restored files—sometimes instantly, sometimes with long but reasonable waits—than by bandwidth.

Backblaze, CrashPlan, and MozyHome also offer services to send your

To make sure everything is running smoothly, test by retrieving a set of files.

Carbonite lets you retrieve only a single file at a time via the Web.

IDrive and Jungle Disk also let you mount the backup on the desktop, and you can use the Finder to browse and copy files, folders, or the whole volume.

While each service (except Carbonite) offers an archive of older versions of each document, only a few make choosing the version you want easy. Backblaze makes you select a snapshot date from a pop-up

restored files via DVD or on a hard drive.

To make sure everything is running smoothly, set yourself a reminder to test the service periodically by retrieving a modest-size set of files—perhaps 100 files totaling a few gigabytes.

And for safety's sake—in case an online storage site goes belly-up or fails to pay its hefty bandwidth bill—you should also back up at home using Time Machine or another method.

Macworld's Buying Advice

Price and ease of use are the primary issues when it comes to choosing an online backup service. CrashPlan Central gets the highest marks for interface design, simplicity, options, and cost for two or more computers. CrashPlan Central also adds desktop and personal remote backup (to other computers you own or to those of your friends) in the same software at no extra cost. (An upgrade to CrashPlan Plus adds a handful of features for desktop backup.)

For people who want to mount a backup drive locally, who want more precise control over every aspect of backup, and who have relatively small backup sets, Jungle Disk provides all the options, albeit with some odd software. For 50GB of stored backups, the cost is \$7.50 in storage; for very large backup sets, an unlimited option is the only real choice.

Glenn Fleishman got his first T1 line in 1994. He writes regularly about networking for *Macworld*, and is the author of several Take Control books (takecontrolbooks.com).

Pros and Cons

Online backups have some positive things going for them—but they also have some drawbacks. Here are a few things to keep in mind.

Pros Off-site storage without the fuss of rotating drives; can be set to constantly update even minor changes; enforces having at least one additional copy of files; provides peace of mind for regional natural disasters, which could damage on-site and off-site computers and drives.

Cons Moderate to long delays in restores; without a personal encryption password, the compromising of company data or a government subpoena could reveal private info; far more expensive over the course of a year than a local backup; a backup service provider's sudden demise could render your current and archival backups permanently unreachable.



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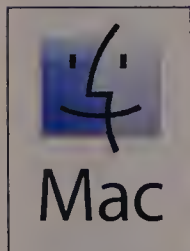


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FIVE FAVORITE POWERPOINT TIPS

Get more out of the popular presentation software with these useful tricks

By Tom Negrino

Whether it's the office standard or you've simply used it forever, Microsoft's PowerPoint (🔗; macworld.com/3348) is a terrific tool for presenting your thoughts and ideas to colleagues. During the many years I've used PowerPoint, I've found a few tips that I go back to again and again. And thanks to the recently released Office 2008 Service Pack 2, now I've got some new tricks too.

1. Write It in Word

The single best thing you can do to improve your presentation is to spend more time—way more time—writing it, rather than fiddling with the look of your slides, transitions, fonts, and graphics. One easy way to focus on content is to write your presentation in Word 2008's Outline View.

In Word, create a new blank document (File ▶ New Blank Document), and then choose View ▶ Outline. Write your presentation as if you were writing your slide bullet points. Word automatically applies its built-in heading paragraph styles (Heading 1, Heading 2, and so on) as you indent text to different levels in the outline. When you reach a point where you want a new slide to begin, press Return to get a new paragraph and then press Shift-Tab or use the Promote button on the Outlining toolbar until you see that the line has the Heading 1 style in the Formatting Palette.

When you're done, choose File ▶ Send To ▶ PowerPoint. Your outline will open in PowerPoint's plain Office Theme. If you'd rather use a custom theme (perhaps something company approved), you can make it the default by using a



Service Pack 2 feature (see the help file at macworld.com/5238 for details).

2. Make Objects Fly

Service Pack 2 adds a long-awaited feature to PowerPoint: custom motion paths for objects. This feature allows you to animate a shape or other object along any path (though it doesn't let you move objects between slides). An object's path appears on your slide as a dotted line with a green arrowhead at the beginning and a red arrowhead at the end. Use controls in the Formatting palette to adjust the behavior and timing of the animation (see "New Motion Paths").

To begin, select an object on your slide, and then click the Custom Animation tab (marked with a star icon) in the Formatting palette. From the palette, click the new Add Path Anima-

tion button and choose one of the drawing tools (line, curve, free-form, or scribble) from the pop-up menu that appears. Click your object and drag to create an animation path. Click while dragging to add points to the path. Double-click to end the line. When the show runs, the shape will follow the path you created.

Want to change a path? Control-click (or right-click) on a path and choose Edit Points from the pop-up menu. Drag the points around to change their positions. When everything is the way you want, you can use the additional controls in the Custom Animation palette to determine when the animation triggers and its speed. You can even add sound effects. (Click More Effect Options to reveal sound options.)

Motion paths you create in PowerPoint 2008 are completely compatible with PowerPoint 2007 for Windows.

3. Turn Bullet Points into Diagrams

PowerPoint's SmartArt feature breathes life into dull bullet points by placing text into easy-to-understand diagrams. Create a SmartArt graphic from scratch by choosing Insert ▶ SmartArt Graphic, selecting a diagram style from the gallery under the toolbar, and then entering the text into the graphic. Better yet, use a little-known feature to convert a set of bullet points already on one of your slides to SmartArt. Place your insertion point into the text box containing bulleted text. Control-click (or right-click), and choose Convert To SmartArt from the contextual menu.

Below the toolbar at the top of the window, PowerPoint opens the SmartArt

Graphics Gallery. Choose a diagram style that you want from the gallery, and PowerPoint converts your bulleted text to fit into the diagram. You can then move, resize, recolor, or apply any of PowerPoint's other graphic formatting tools to the SmartArt diagram. Don't forget that you can select an individual shape in a SmartArt graphic and format it separately from the other shapes for an even more customized effect.

4. Command the Stage

When you want to bring the audience's attention from your slides back to you, use keyboard shortcuts. While you're expanding on a point, press the B key to make the screen go black, or press the W key for a white screen. Press the same key again to continue.

When you need to point to something on screen, you can use a laser pointer, or better yet, use The Omni Group's free OmniDazzle (www.omnigroup.com), which lets you spotlight, annotate, or even zoom in on part of your screen.

Finally, you can get away from your Mac and out from behind the podium by using an Apple Remote to step through transitions and slides. Just make sure that you pair the remote with your Mac so that no one else can prank you with

his or her own remote. To do that, place your remote about 3 or 4 inches away from the infrared sensor on the front of your Mac, and then press and hold the menu and next/fast-forward buttons simultaneously for 5 seconds.

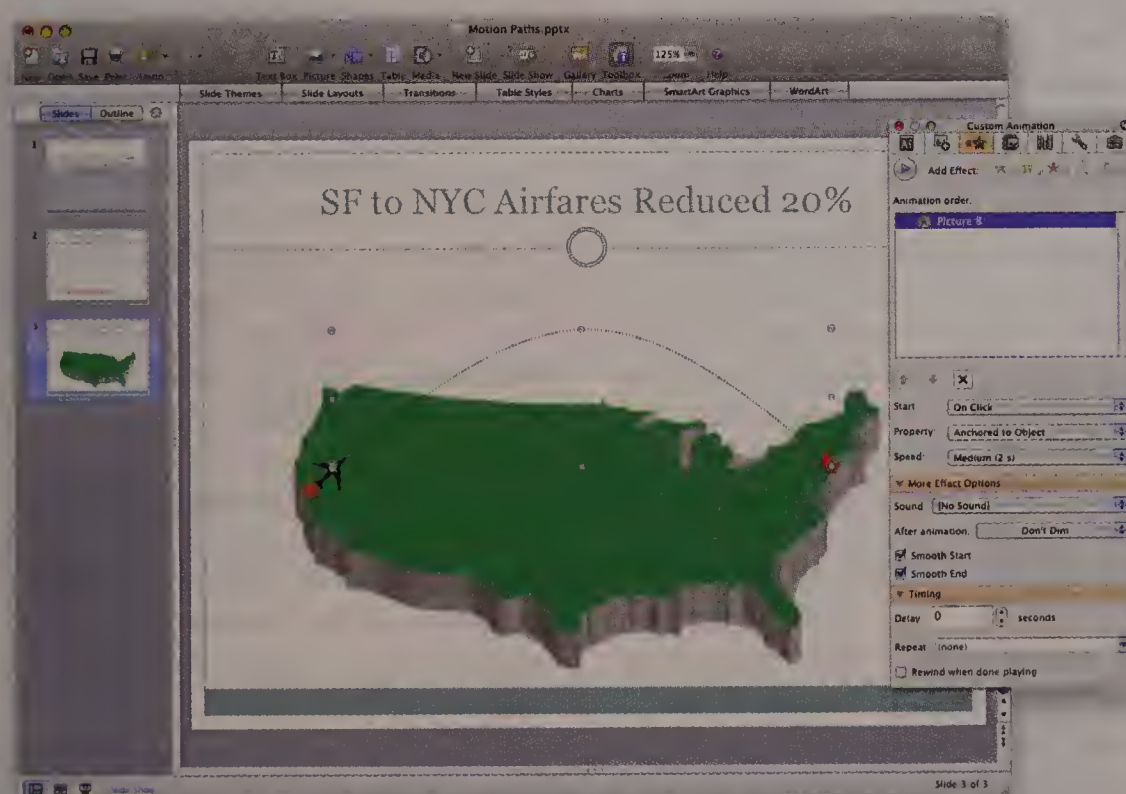
5. Always Be Ready to Present

Use PowerPoint's integration with iPhoto to carry presentations with you everywhere—on your iPhone, iPod touch, or iPod. All you need to do is export the presentation as an iPhoto album.

In PowerPoint, choose File ► Send To ► iPhoto. In the resulting dialog box, enter a name for the iPhoto album, and then choose whether you want the slides exported in JPEG or PNG format. You can also choose to export all the slides or just selected slides. Click Send To iPhoto and PowerPoint exports the slides, creating the new iPhoto album.

The next time you sync your mobile device, make sure your album syncs too. It will be available in the Photos app, and you'll be prepared to show off your ideas wherever you go.

Tom Negrino is a longtime *Macworld* contributor and a coauthor of *Styling Web Pages with CSS: Visual QuickProject Guide* (Peachpit Press, 2009).



New Motion Paths Want to illustrate a point with animation? Office's Service Pack 2 adds the ability to create motion paths in PowerPoint. An object's path appears on your slide as a dotted line.



Next Mac Office Due Late 2010

The next edition of Microsoft Office for Mac is now slated for release in late 2010 and will include Outlook for Mac, a new application that will replace Entourage.

"We'll bring forward all the functionality from the Entourage Web Services Edition, including public folders, managed folders, and category syncing, but with Outlook we're going even further and building a whole new application," said Eric Wilfrid, the Microsoft Mac Business Unit's general manager.

Entourage has been criticized for its large database, which is difficult to back up and can cause downtime when corrupted. Wilfrid said that the new Outlook will use a new, modern database.

"The new database gives us incredible reliability, better performance, and better integration with technologies such as Time Machine for backup and Spotlight for search," he said.

Wilfrid emphasized that Outlook for Mac won't be a feature-for-feature match with Outlook on Windows but will be extremely compatible with it.

Microsoft will also simplify its current Office 2008 offerings. Replacing the \$399 Standard Edition and \$499 Special Media Edition will be the new \$399 Business Edition, which will include the Web Services Edition of Entourage and Microsoft Document Connection for Mac. Microsoft Office Business Edition will include additional templates and clip art, and more than eight hours of Lynda.com training videos.—**JASON SNELL;**

ELIZABETH MONTALBANO OF IDG NEWS SERVICE ALSO CONTRIBUTED TO THIS REPORT

FOUR FAVORITE EXCEL TIPS

By Sharon Zardetto

You're using Microsoft Excel 2008 (🔗; macworld.com/3347) or 2004, and you need some tricks up your sleeve for easing day-to-day tasks. Luckily, I have some for you.

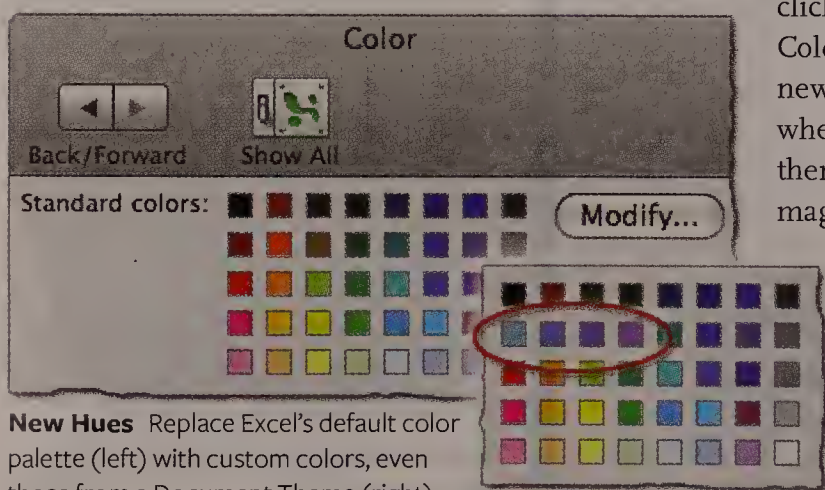
1. Customize Sort Orders

When it comes to sorting data, Excel provides several standard sort options for numbers, dates, text, and so on. But sometimes you need something beyond the built-in choices. For instance, you may prefer to organize your expenditures by season, with summer listed first, instead of the alphabetical *fall, spring, summer, winter*. You can do this by creating a custom sort list.

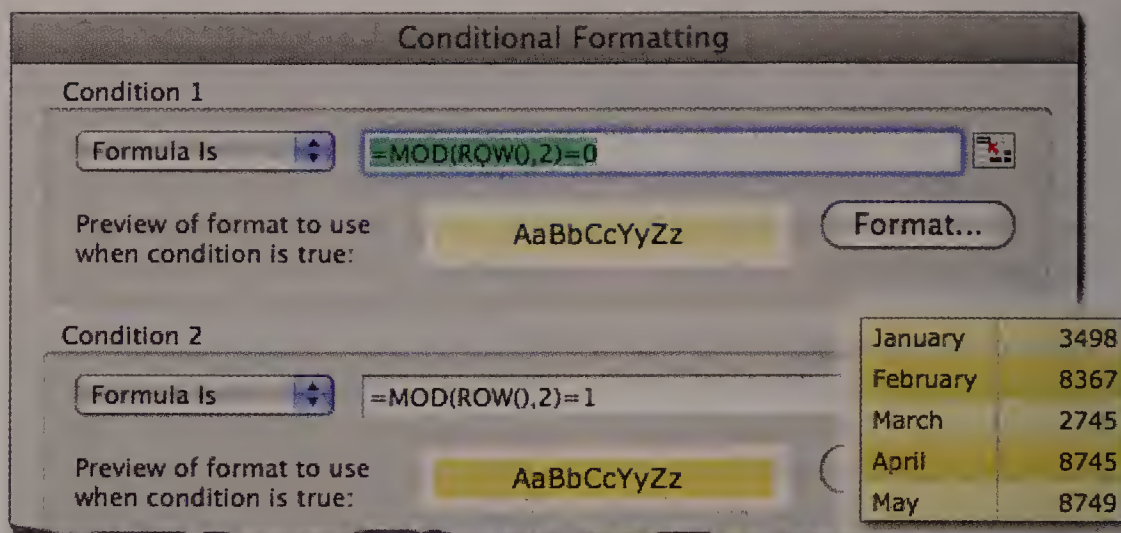
Enter the items in contiguous cells in the order you want, and select those cells. Choose Excel ► Preferences and go to Custom Lists; click Import and then click OK. To use your custom sort order, select the column or area you want sorted and choose Data ► Sort. Click Options in the Sort dialog box, and select your custom list.

2. Simplify Cell Selection

Going from the last cell in one row or column to the first cell of the next usually requires selecting that cell with the cursor or using several key presses. Instead, select the block of cells by dragging across them before you start entering data. Use the Tab key to move across a row and the Return key



New Hues Replace Excel's default color palette (left) with custom colors, even those from a Document Theme (right).



Spreadsheet Stripes Use two-condition formatting to create alternating rows of colors (inset).

to move down a column. When you reach the edge, press that key again to jump to the beginning of the next row or column.

3. Replace Standard Colors

You can add clarity or visual interest to a spreadsheet by using colored text or cells. Unfortunately, the Standard palette's garish selection leaves much to be desired. Here's how to change the palette's choices and, if you're running Excel 2008, even use the more attractive Document Theme colors.

To use theme colors, open the Formatting Palette and expand the Document Theme panel. Find a theme with colors you like, and leave them showing in the panel. To alter a Standard palette color, open Excel ► Preferences and click Color; select any hue you want to replace (hot pink?), and

click Modify to open the Colors palette. Choose a new shade from the color wheel; or, if you want a theme color, select the magnifying glass and click the color that's showing in the Document Theme panel. Click OK in the Colors palette to add the new hue.

4. Create Alternating Row Colors

If you want stripes of alternating colors in your worksheet, you'll have to do it yourself. The AutoFormat feature for tables lets you add shaded lines, but if you delete a row or sort your table, you end up with a patchwork of shaded and plain cells. By using two-condition formatting, you can create tables with stripes of alternating colors.

Select the area you want to format and choose Format ► Conditional Formatting. Select Formula Is from the pop-up menu and type `=MOD(ROW(),2)=0` (this identifies all even-numbered rows). Click the Format button; under the Patterns tab, select a color for the background and click OK. To create the second condition, click the Add button in the Conditional Formatting dialog box. Repeat the formatting procedure described above, but use `=MOD(ROW(),2)=1` (to identify odd-numbered rows), and choose a contrasting pattern color.

Since Excel's built-in Standard palette doesn't offer two shades of subtle, coordinating colors, use the previous tip to create colors that will work well together without overwhelming your table data.

Sharon Zardetto is a longtime Mac writer. Her latest e-book is *Take Control of Safari 4* (TidBits, 2009; www.takecontrolbooks.com).

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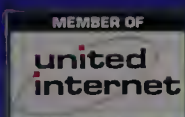
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TWO FAVORITE WORD TIPS

By Kirk McElhearn

If you frequently use Microsoft Word (🔗; macworld.com/3345), you know that shortcuts and small timesavers can make a big difference.

Because Word is so expansive, many of its useful features aren't obvious, and its default settings aren't always very useful.

Here are two of my favorite tricks for making Word work better.

1. Apply Styles with Shortcuts

Set up keyboard shortcuts for your favorite styles and you can whiz through a document and quickly apply them.

Choose Tools ► Customize Keyboard. In the Categories list on the left, scroll down and select Styles. On the right, you'll see a list of the styles currently available in your document. Choose one, then highlight the Press New Keyboard Shortcut box and type in your shortcut

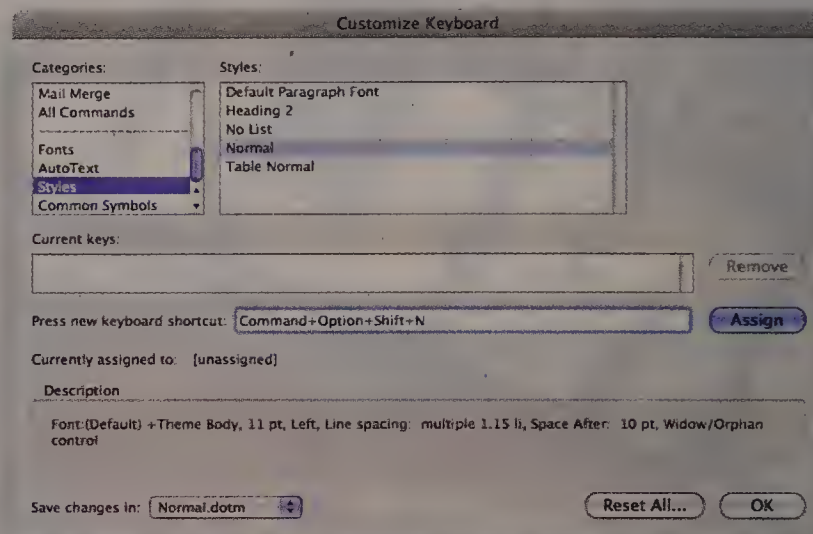
keys. Click Assign. Now whenever you want to apply that style, highlight your text and press the key combination.

2. Paste Text in the Right Style

If you've ever copied and pasted text from Web sites and e-mails into Word, you've probably found that URLs are still underlined and hyperlinked, e-mail threads retain their various colors, and more. You then need to fix the text in Word to get rid of this special formatting.

But by pasting text to match the current

style, you don't have to worry about reformatting it once you've added it to your document. The long way to do this is to copy some text and then choose Edit ► Paste Special, select Unformatted Text



Speedy Word Styles Using the Customize Keyboard dialog box, you can set keyboard shortcuts to quickly assign document styles.

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from the As box, and click OK. Or you can do all that with a single keyboard shortcut. All you need is an AppleScript.

Open Script Editor (in /Applications/AppleScript), and copy and paste the following script from macworld.com/5239:

```
tell application "Microsoft Word"
    tell selection
        try
            set theClip to Unicode
```

```
text of (the clipboard as record)
        type text text theClip
    end try
end tell
```

Save this script, name it **Paste Plain Text\smV.scpt**, and leave the File Format pop-up menu set to Script. (The *smV* in the name means this script will activate when you press ⌘-Shift-V.) Store the file in /Users/username/Documents/

MicrosoftUserData/Word Script Menu Items. The script should now appear in Word's scripts menu.

To use the script, copy text from any program. In Word, put the cursor where you want to place the text and then press ⌘-Shift-V. The text will be pasted as plain text.

Senior Contributor **Kirk McElhearn** writes about more than just Macs on his blog, Kirkville (www.mcelhearn.com).

Skooba Checkthrough Roller

Since the introduction of new TSA rules for "checkpoint-friendly" laptop bags, we've seen a deluge of new, guideline-compatible bag designs. But if you save your back by putting your gear in a rolling bag for travel, you were out of luck—until now, that is, with the release of Skooba Design's \$190 Checkthrough Roller (www.skoobadesign.com). It uses the standard inline-skate wheels and telescoping handle for easy rolling, and it has a large interior compartment that holds files, a pair of shoes, and a change of clothes. But unlike most rollers, the Checkthrough's 17-inch laptop compartment folds out to lay flat for X-ray screening; there's even a see-through window for visual inspection. The outside of the laptop section is a bit light on padding, but that's a small quibble compared with the convenience a checkpoint-friendly rolling bag affords you. —DAN FRANKS



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Reviews

WHAT WE'RE REVIEWING
ONLINE THIS MONTH

HARDWARE

Brother MFC-6890CDW △

Brother's MFC-6890CDW is a large-format inkjet multifunction device targeted at small- and medium-size businesses. It can print, scan, and fax over USB, over wired Ethernet, or wirelessly over Wi-Fi. The MFC-6890CDW has a 50-sheet automatic document feeder for copying and scanning, memory card slots, and a PictBridge USB port, and it can automatically print two-sided letter-size documents. The MFC-6890CDW has a ton of features and prints good-quality office documents (especially text). Photos are not its strong suit, however, and its paper handling leaves something to be desired (macworld.com/5217).

★★★★; \$350; Brother, www.brother-usa.com

Hewlett-Packard 2009m

HP's 2009m is an affordable 20-inch widescreen display that produced impressive image quality in our jury tests. We saw nuanced, accurate skin tones in photographs, and found small fonts easy to read. The screen has an antireflective coating that gives it a nice sheen while also enhancing the screen's readability. The 2009m's 16:9 aspect ratio and 1,600-by-900-pixel native resolution also make it a

good tool for showing HD content. Unfortunately, the 2009m does not have an HDMI connection—it offers only VGA and DVI ports (macworld.com/5218).

★★★★; \$200; Hewlett-Packard, www.hp.com

Iomega eGo Mac Edition 500GB ▽

Shiny, compact, and sleekly designed, Iomega's eGo line of portable hard drives injects some much-needed style into the crowd of gray, brick-shaped external drives. The eGo is light, portable, durable, and only slightly larger than an iPhone. The drive weighs less than 7 ounces and can easily fit into a pants pocket. The eGo performed admirably, but not exceptionally, in our speed tests; in particular, it slowed down a bit in our duplication and Photoshop tests (macworld.com/5219).

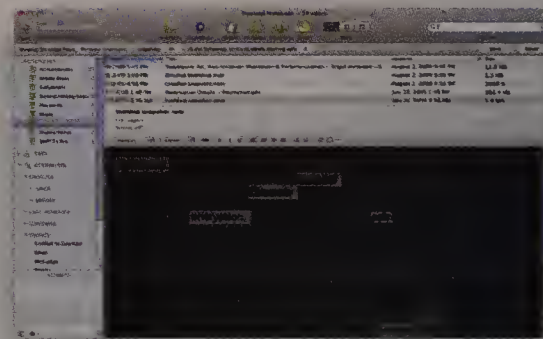
★★★★; \$150; Iomega, go.iomega.com

Verizon MiFi 2200 ▽

Whether you're at the park, in the backseat of the family car, or stuck in a hotel conference room, you might be able to get on the Internet with your cell phone, but you're probably out of luck when it comes to your laptop. Not so if you have the Verizon MiFi 2200. The size of a chocolate bar, this Wi-Fi base station ingeniously provides a signal to up to five devices, routing them all through its on-board 3G cellular data connection. The MiFi requires a service contract, much as a cell phone does, so it's not a one-time purchase (macworld.com/5220).



★★★★; \$299 (\$100 after rebate with two-year contract); monthly access, \$40 to \$60; day-pass access, \$15; Verizon Wireless, www.verizonwireless.com



SOFTWARE

Evernote 1.4 △

This note-capturing tool helps you bring together the disparate bits of information that cross your path every day, letting you manage that information in ways that are meaningful and useful to you. Enter text notes; capture images with your iSight or your iPhone's camera; import audio, video, and documents; and more. Once your data is in the program, you can access it 24/7—using Evernote on your desktop, online, or via your phone to keep your files synced and up-to-date in all locations. The program boasts powerful search features and can even recognize and search for text in images (macworld.com/5214).

★★★★; free; Premium account, \$5 per month or \$45 per year; Evernote, www.evernote.com

iBiz 4.0

iBiz 4.0 is a billing and time-management application that helps you track the work you do, bill clients for completed work, and then track payments so you get paid for that work. Unlike other programs of its ilk,

PRODUCT
WATCH

HARDWARE

Doxie, from Apparent (www.doxiescanner.com): Portable USB document scanner can upload directly to Web services like Flickr (\$129).

Padlock Secure Hard Drive, from Apricorn (www.apricorn.com): Portable external hard drive has built-in keypad to help you prevent unauthorized access (\$99).

WorkForce 610, from Epson (www.epson.com): Multifunction device includes a four-color inkjet printer, a 5,760-by-1,440-dpi scanner, a copier, and a fax (\$200).

SOFTWARE

SubEthaEdit 3.5, from The Coding Monkeys (www.codingmonkeys.de): Collaborative text editor can hide code in document (\$38).



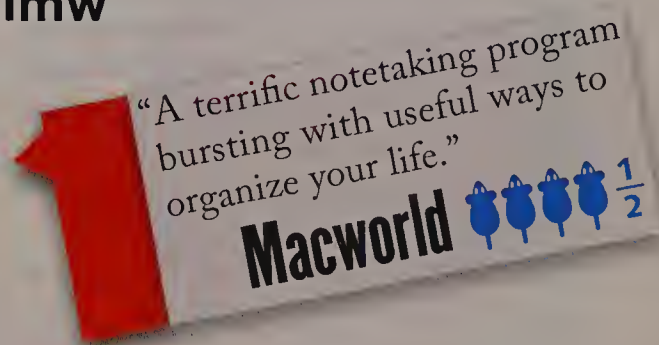
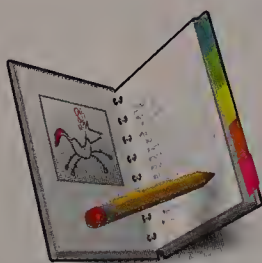
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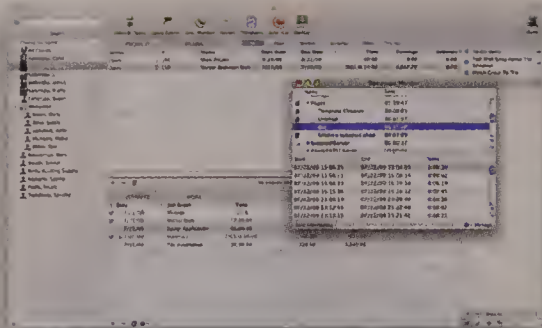
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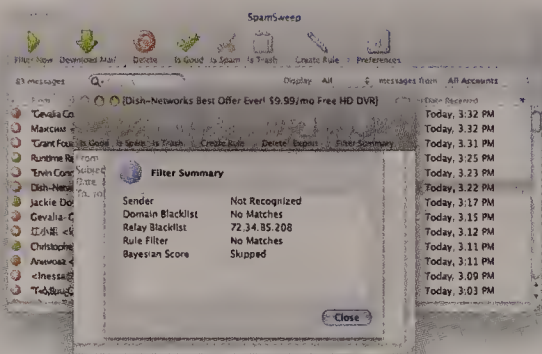
Small Dog
Electronics
Always Big Your Side

TEKSERVE



iBiz takes a client-centric (rather than project-focused) approach to managing your work. The program is flexible, allowing you to bill not only for the time you've spent, but also per item, for mileage, or at a flat rate. The program's downsides include a small problem synchronizing with iCal and a limited range of templates (macworld.com/5215).

★★★½; \$40; Professional (one server, two clients), \$100; IGG Software, www.iggsoftware.com



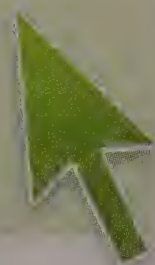
SpamSweep 1.6.1

Bains Software's SpamSweep 1.6.1 is an easy-to-use stand-alone spam-filtering application that effectively traps junk mail and gets it out of your inbox. Instead of working inside your e-mail program, SpamSweep runs separately, processing your messages and then sending the good ones on to your e-mail client. SpamSweep uses a blacklist, a whitelist, and a Bayesian filter to identify spam (bad) and ham (good) messages. However, you don't have direct access to any of these resources. That means it's more difficult to customize your filters, which can be limiting (macworld.com/5216).

★★★½; \$25; Bains Software, www.bainsware.com

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HARD DRIVES

Desktop

PRODUCT	RATING	PRICE ^A	TYPE	FIND CODE ^B
Professional Quad-Interface (pictured); www.verbatim.com	★★★★	\$249 (1TB)	quad interface	4963
Thunder Pro A/V Quad www.ezq.com	★★★★	\$188 (1TB)	quad interface	5181
FreeAgent Desk for Mac www.seagate.com	★★★★	\$179	triple interface	4167



HARD DRIVES

Portable

PRODUCT	RATING	PRICE ^A	TYPE	FIND CODE ^B
Mercury On-the-Go (pictured) www.macsales.com	★★★★½	\$160 (320GB)	quad interface	4258
eGo Mac Edition www.iomega.com	★★★★	\$145	triple interface	5219
G-RAID mini2 SSD www.g-technology.com	★★★★	\$2199	quad interface, SSD	4766



MONITORS

Widescreen

PRODUCT	RATING	PRICE ^A	TYPE	FIND CODE ^B
324 LCD (pictured) www.lacie.com	★★★★½	\$899	24-inch display	3896
LP3065 www.hp.com	★★★★	\$1149	30-inch display	2509
MultiSync LCD3090WQXi www.necdisplay.com	★★★★½	\$2215	30-inch display	3770



PRINTERS

Laser

PRODUCT	RATING	PRICE ^A	TYPE	FIND CODE ^B
C544DN (pictured) www.lexmark.com	★★★★½	\$496	LED, color	4356
C6150dn www.okidata.com	★★★★½	\$777	LED, color	3899
HL-4070CDW www.brother-usa.com	★★★★½	\$440	PostScript-compatible	3385



PRINTERS

Multifunction

PRODUCT	RATING	PRICE ^A	TYPE	FIND CODE ^B
Pixma MX850 (pictured) www.canon.com	★★★★½	\$161	inkjet	3593
Photosmart C7280 www.hp.com	★★★★	\$215	inkjet	3581
Color LaserJet CM1312nfi www.hp.com	★★★★	\$374	laser	5183

^AAll prices are the best current prices taken from a PriceGrabber survey of retailers at press time. ^BIn a browser's address field, typing a find code after macworld.com/ takes you to a product's review or overview.

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"With a fantastic assortment of 12 Mac security apps all bundled together at a bargain price, this is a must-have deal that Intego is offering to Mac users; I recommend you take advantage and place your order while stocks last!" Ed Tranter, MacDirectory magazine.

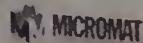
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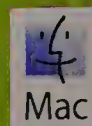
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APPLE UPDATES IPOD LINEUP

Video-recording Nano and faster Touch highlight changes

By Macworld Staff

In September, Apple held what has become an annual occurrence—a media event unveiling new iPods to get the company in position for the holiday shopping season.

iPod Nano

The most significant update was to the iPod nano, which enters the video age with a built-in camera capable of shooting video. Why a video camera for the nano? Apple CEO Steve Jobs, who acted as emcee during his first public event since undergoing a liver transplant earlier in the year, said that the company was inspired by the popularity of pocket-size flash memory-based video cameras like those from Flip and Kodak.

“This market’s really exploding,” said Jobs, “and we want to get in on this.”

The new iPod nano comes in 8GB and 16GB models, each of which incorporates a video camera and microphone on the back of the device, as well as a built-in speaker. The video camera shoots H.264



Expanded Nano The iPod nano saw the most changes, with the addition of video recording, an FM radio, a pedometer, new colors, and more.

video at 640 by 480 pixels and up to 30 frames per second with AAC audio in either portrait or landscape modes. It doesn’t support still photos.

In addition, the new nano features 15 special effects—including X-Ray, Film Grain, and Security Cam—that you can apply in real time. The nano can display video or sync it back to your computer, where you can easily upload the clip to YouTube, Facebook, or MobileMe, or share it via e-mail. The microphone can also be used with the nano’s voice-recording feature.

The latest nano now has VoiceOver support, which provides audible navigation cues in 20 languages. It also supports iTunes 9’s Genius Mixes feature, which creates up to 12 endless playlists of music based on your existing library.

A built-in pedometer can measure your steps and sync the information with the

Nike+ service. And, in a first for an iPod, the nano offers a built-in FM radio tuner. The tuner includes support for live pause, which lets you pause a live program and resume it later (the radio features a 15-minute buffer). Also supported is iTunes Tagging, which lets listeners tag radio songs they like and then preview and optionally purchase those songs next time they sync with iTunes.

The new nano comes in nine colors: black, blue, green, orange, pink, purple, silver, yellow, and—as part of the (Product) Red campaign—red. The 8GB model costs \$149 and the 16GB model costs \$179.

iPod Touch

Apple cut the price on its 8GB iPod touch while boosting the performance and capacity of the other models of its touchscreen music player. The 8GB iPod touch now costs \$199, a \$30 reduction from its old price tag. A 32GB model costs \$299, the same as for the now-eliminated



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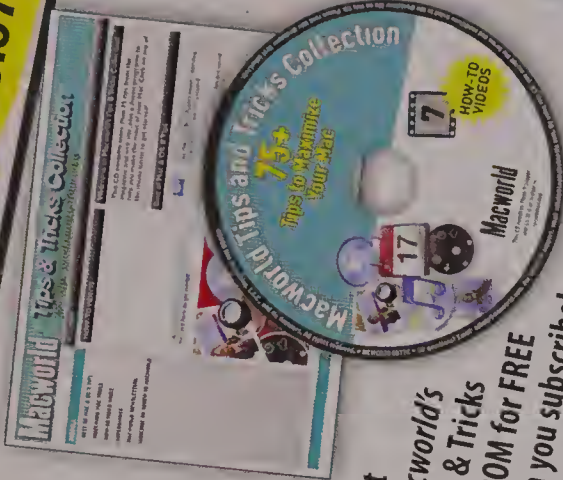
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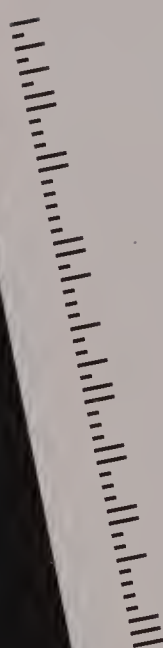
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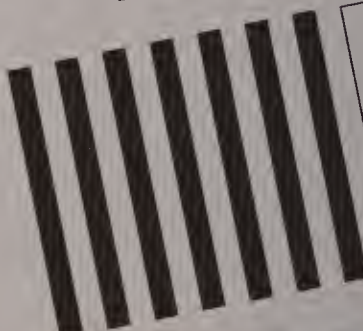
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16GB model it replaces, and Apple added a 64GB model, doubling the capacity of the touch, for \$399.

The 32GB and 64GB models include faster processors than were in the previous iPod touch generation—Apple says 50 percent faster—as well as support for Open GL|ES version 2.0, the cross-platform graphics API for mobile phones, PDAs, and video game consoles.

iPod Shuffle

The latest version of the iPod shuffle is identical to its predecessor in terms of size, buttonless design, and functionality. The differences are that Apple has added a 2GB, \$59 model to go along with the 4GB, \$79 model, and it now comes in black, blue, green, pink, or silver. Apple has also introduced a 4GB special edition polished stainless-steel model, for \$99.

Answering criticisms of the iPod shuffle design, which moved the controls to the headphone cord, Apple said that it's working with third-party headphone makers to integrate the controls into their headphone designs, and that adapters are available for standard headphones as well.

iPod Classic

Of all the iPod models, the iPod classic has changed the least. Apple bumped its capacity from 120GB to 160GB and kept the \$249 price tag.



Same Old Shuffle New capacities and colors are the only changes to the shuffle.



iTunes 9 DEBUTS

By Peter Cohen

At Apple's September iPod event, the company also showed off iTunes 9, the latest version of its music and video jukebox software, which includes several new features.

Home Sharing

In the past, synchronizing iTunes among multiple computers was difficult. The new Home Sharing feature lets you drag and drop to copy songs, movies, and TV shows between as many as five authorized computers in your house. Each user can see just the content he or she is missing, and iTunes can automatically add new purchases from other computers to that person's library.

Improved Syncing

In iTunes 9, Apple has made changes to the way you sync media to iPods and iPhones. You can now sync music by artist and genre, as well as sync photos through iPhoto's Events and Faces features, for example. The new version also improves application syncing and management of iPhone and iPod touch devices, providing the ability to organize your apps in iTunes rather than only on your device. A new interface lets you rearrange the location of applications, search for apps, and more.

Genius Mixes

Using the results from the more than 27 million libraries with more than 54 billion songs that iTunes' Genius feature has submitted and analyzed, iTunes 9 can now create Genius Mixes. These mixes are made up of songs from your music library that, in theory, go well together.

iTunes Store Improvements

Apple also made significant changes to the look and feel of the iTunes Store. It has new artist, movie, and TV show pages, and it offers better navigation, including a redesigned horizontal navigation bar.

iTunes 9 introduces iTunes LP and iTunes Extra, features that provide additional content for music and movies, respectively. iTunes LP gives music listeners an expanded media experience by adding liner notes, lyrics, photos, video content, and more to albums (seemingly to offer buyers an incentive to purchase whole albums instead of individual tracks). iTunes Extra works the same way for movies, offering material equivalent to the special features of a DVD, including documentaries, deleted scenes, interviews, and interactive galleries. Both features were available only on a limited number of albums and movies at launch time.

SNOW LEOPARD: QUICKTIME X

By Jonathan Seff



Slimming Down QuickTime X's Trim function lets you select a portion of video to retain.

Snow Leopard brings with it a new version of Apple's QuickTime multimedia architecture and player, called QuickTime X.

New Viewer

The first thing you'll see when you open a movie in the new QuickTime Player app is a brand-new viewer. Both the title bar (with the file's name and the close, minimize, and maximize buttons) and the controls appear on top of the video. The controls are contained in a floating window that you can place anywhere on the video. Translucent black has replaced the gray of older QuickTime versions. Once you begin playing a movie, the title bar and controls fade away. What you're left with is a video playing in a borderless window with slightly rounded corners. A Share button offers a pop-up window with choices for encoding and sending your video to iTunes, to a MobileMe Gallery, or to YouTube. There's also a Trim option that lets you drag the ends in to shorten the video to a smaller clip.

Export Changes

Apple's new Share button hints at QuickTime X's simplified method of

converting and exporting video. Whereas QuickTime 7 has an Export option that lets you choose from different codecs and customize your audio and video options, QuickTime X has only the aforementioned Share choices, as well as a slightly updated version of QuickTime 7's Save For Web option, and a Save As menu that offers presets for Apple devices and 480p and 720p videos.

Screen Recording

One big addition to QuickTime is that it now lets you capture video of your Mac's screen. The software captures the entire screen, and creates movies that are the same frame size as your display resolution. You can choose between high quality (this uses the more efficient but processor-intensive H.264 codec, which creates more-compact files) or medium quality (this uses Photo JPEG—which is easier on your CPU, but produces huge files).

Play Videos in the Finder

In the updated QuickTime, when you view movie files in either icon or Cover Flow view, hovering over a file brings up a play button that lets you begin watching the complete video in the Finder.

Upgrade Your Headphones

By Dan Frakes

There's no easier way to improve the sound quality of your iPod than to swap out the original Apple earbuds for something better. With the right headphones, an iPod or iPhone is capable of producing excellent sound. To help you find the right step up the audio ladder, we've rounded up nine in-ear-canal headphones (also known as canalphones; macworld.com/5259) and 12 canalbud models (macworld.com/5260).

You can find a complete discussion of these headphone types in our primer (macworld.com/5261), but here's the quick distinction: canalphones fit inside your ear canals and are designed to block most external noise, whereas canalbuds have rounder, flexible-tip earpieces that sit just inside the ends of your ear canals. Canalphones seal out lots of external sound and can provide great audio; canalbuds, which tend to be less expensive, often achieve better comfort at the expense of a tight seal and ultimate sound quality.

Which are our favorites? In the in-ear-canal category, we prefer the \$150 Etymotic hf5 High-Fidelity Earphones (★★★★) and the \$300 Westone UM2 True-Fit Dual-Drive Earphones (★★★★). As for canalbuds, we like the \$50 Denon AHC351K In-Ear Headphones (★★★★), the \$60 Maximo iM-590 iMetal Isolation Earphones (★★★★), and the \$80 Ultimate Ears MetroFi 220 Noise Isolating Earphones (★★★★).



Can a music program create professional, real-sounding arrangements and solos for your songs from only a chord progression?

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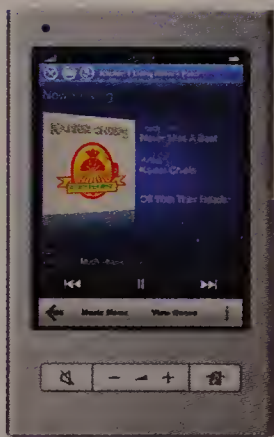
Dexim AV Dock Station with Remote Control ▴

The AV Dock Station is an attractive, compact dock that includes an IR remote, a composite AV cable, an AC adapter, and eight inserts that accommodate all iPhones and iPod touches, the third- and fourth-generation iPod nanos, the iPod classic, and the fifth-generation iPod (the dock is also compatible with the second-generation iPod nano, but doesn't include a dock insert for it). It's a more affordable option than the one provided by Apple for remotely controlling an iPod or iPhone attached to a television or stereo. If you want an experience you can control completely from your couch, you'll need to spend more money for a dock that either provides a menu system on the TV or comes with an LCD-equipped remote. If you can live with occasionally getting up to punch a couple of buttons on your iPod touch or iPhone or glance at a display, this is a product worthy of your consideration (macworld.com/5222).

★★★★; \$80; Dexim, www.dexim.net

Sonos Controller 200 (CR200) ▸

The Sonos Controller 200 is an updated version of the company's controller for its Sonos Multi-Room Music System. Slightly larger than a deck of cards at 4.5 inches



tall, 2.9 inches wide, and 0.7 inch thick, and bearing a 3.5-inch, 640-by-480-pixel color touchscreen display, the CR200 is significantly less bulky than the original CR100 controller. The CR200 bears a hierarchical interface. Tap a command on the main music menu and work your way down, through a series of menus, to arrive at the function you want.

The controller's interface is very similar to that of the company's free iPhone app, but the CR200 features an easier-to-use music menu and the ability to obtain additional information about some musical content. It's also far snappier than the iPhone app—tap on a button, and the desired action happens immediately. Having dedicated buttons for mute, volume, and zones makes it easier to work with these common features. And it's nice having a dedicated controller available whenever you want it rather than an app that you must locate on your iPhone or iPod touch (which often forces you to quit another application you're engrossed in just to do something with your Sonos system).

The dedicated controller is also useful when you want to pass it to someone you'd rather not have rifling through your iPhone or iPod touch (your child or nosy father-in-

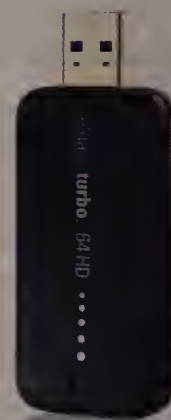
law, for example). Finally, it's great to pick up the controller after it's been away from the charging cradle for a couple of days and discover that you still have half the battery charge left (macworld.com/5221).

★★★★½; \$349; Sonos, www.sonos.com

Elgato Turbo.264 HD ▸

Like the original Turbo.264, the HD model is designed to speed up video encoding. If you own an Intel Mac and routinely encode QuickTime-compatible videos or import clips from an AVCHD video camera, have had it with the time it takes to do the job, and are willing to sacrifice some quality, the Turbo.264 HD will be a worthwhile addition to your computing life, particularly on a slower Mac. It also speeds the process of converting video directly from AVCHD camcorders, lets you trim video clips before converting them, allows you to combine multiple clips into one, and outputs video to HD formats such as YouTube HD, 720p, and 1080p (macworld.com/5223).

★★★★½; \$150; Elgato, www.elgato.com

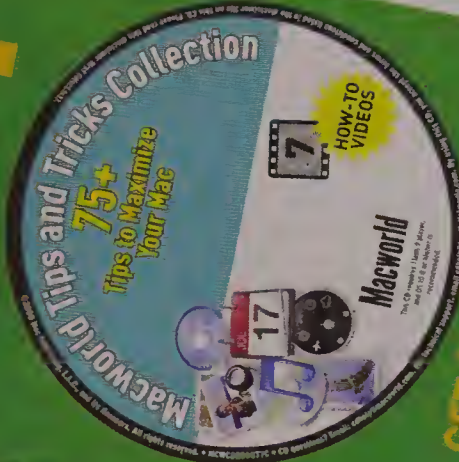


iPods: Current Lineup

PRODUCT	SPECS	RATING	PRICE ^A	DISPLAY	PERFORMANCE	FIND CODE ^B
iPod Classic	160GB	★★★★	\$249	2.5-inch color	36 hours of music playback; 6 hours of video playback	5262
iPod Touch	8GB	★★★★	\$199	3.5-inch color	36 hours of music playback; 6 hours of video playback	3864
	32GB	★★★★½	\$299	3.5-inch color	36 hours of music playback; 6 hours of video playback	5257
	64GB	★★★★½	\$399	3.5-inch color	36 hours of music playback; 6 hours of video playback	5258
iPod Nano	8GB	★★★★½	\$149	2.2-inch color	24 hours of music playback; 5 hours of video playback	3867
	16GB	★★★★½	\$179	2.2-inch color	24 hours of music playback; 5 hours of video playback	3868
iPod Shuffle	2GB	★★★★	\$59	none	10 hours of music playback	5267
	4GB	★★★★	\$79	none	10 hours of music playback	5268

^AAll prices are the best current prices taken from a PriceGrabber survey of retailers at press time. ^BIn a browser's address field, typing a find code after macworld.com/ takes you to a product's review or overview.

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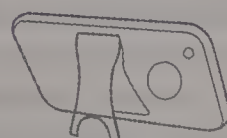
iPhone 3GS
16GB 32GB



iPhone 3G
8GB 16GB



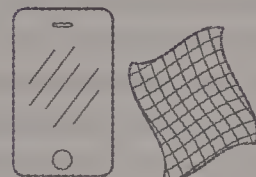
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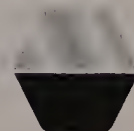


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RECOVER FROM DIGITAL PHOTO DISASTERS

How to protect your pictures from loss and accidental erasure

By Derrick Story

Thanks to the digital age, it has never been easier to take great photos—or to lose them. When something goes wrong—whether you have a corrupt file or overenthusiastically use the camera's erase button—valuable pictures can disappear into the digital ether, never to be seen again. Fortunately, you can take steps now to avert disaster. And if trouble does strike, you can recover from it.

Protect the Media

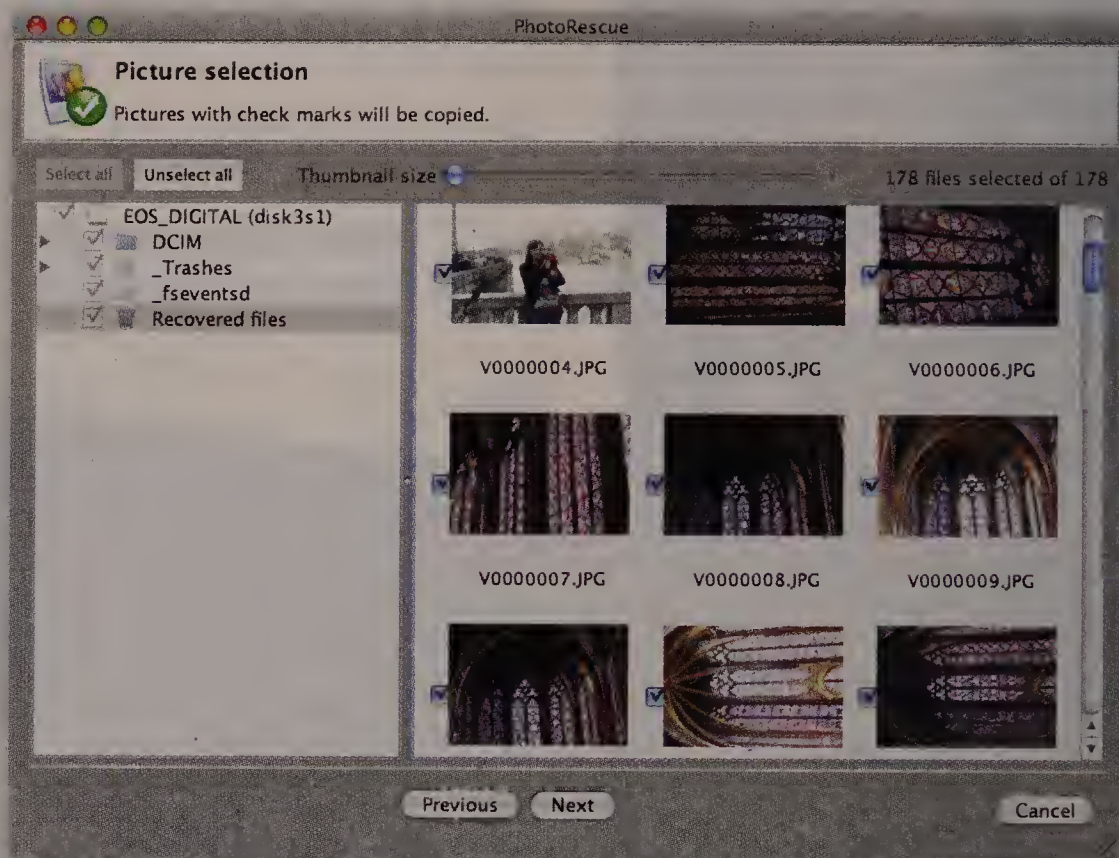
Photographers tend to overlook the most obvious booby trap: losing the memory card itself.

Start by writing your contact information on every memory card you have (I affix a small label to my cards). And don't stop with memory cards. Every hard drive you own, as well as every laptop, digital camera, and memory card reader, should be clearly labeled with your name and e-mail address. This is your first line of protection against losing valuable data.

Use the 'Two Places' Rule

You want your images to reside in at least two places. When you first record an image is when you're most vulnerable to loss. Once you upload it to your Mac or save it to a portable hard drive, it's living in two places. Great! But if you erase the memory card right away, you're back to living a precarious existence.

The "two places" rule says that you don't erase the memory card until you've backed up the pictures on your computer to a second location. That could be a portable drive, an online storage service, or a second computer. Only then can you erase the card.



Lost... and Found Recovery software such as PhotoRescue can unearth files from your media card, even after you've pressed the camera's erase button.

Delete with Care

Once you are ready to delete images from your camera, you typically have three options:

One at a Time For the bad shot that you never want to see the light of day, you can usually press a button on the back of the camera to make it disappear. But photographers are sometimes too aggressive, deleting pictures before getting a good look at them. Instead, delete only the absolute failures on the camera, and wait until you see the rest on a big LCD to decide about them. Even if part of an image is out of focus, you may be surprised to discover a great little detail elsewhere in the shot. A bit of creative cropping could turn a dud into a keeper.

Erase All Photos

The convenient Erase All command is what most photographers use to clear out the memory card after they've safely uploaded their images to a computer and backed them up. When you click the Erase All button, all the photos disappear from sight and you can start shooting again with a clean slate. (If you use the Protect Image command on your camera to prevent the accidental erasure of important photos, then the Erase All command will not affect them.)

I say *disappear* because technically the photos aren't deleted—they're most likely still on your memory card even after you've used the Erase All command. Over time, the new images you take replace them.

Format Card The Format Card option removes all images from sight, even

those you've marked as protected. You should use this command with care. Some experts recommend that you format memory cards every few months to clean up the file directories on those cards. Over time, cluttered directories can affect card performance. Even more important is that you use the Format Card command on new memory cards so they're optimized for your particular camera. This is especially helpful when

Follow the 'two places' rule: don't erase the memory card until you've backed up your pictures to a second location.

you're moving a card from one camera brand to another.

By the way, when you import photos into iPhoto, the program will offer to erase your memory card for you. Although there's nothing technically wrong with this approach, I don't recommend it because of the "two places" rule. A safer approach is to disconnect the card with its pictures intact, go about your backup ritual and then use the Erase All command in the camera to start anew.

Date Everything

Media has a life expectancy. For example, SDcard.org says that we can expect a 10-year lifespan for most SD memory cards. High-quality DVDs stored in a safe environment—away from direct sunlight or extreme temperatures—should last about a decade too. I trust mechanical hard

drives for only about three or four years because they have moving parts that can wear out.

By dating all of your media when you start using it, you'll have a better sense of when to replace it.

Recover Accidentally Erased Images

Even when you try to do everything right, things can go wrong. Fortunately, there is software that can recover deleted

photos from your memory card.

To ensure the best results possible with recovery software, make sure you don't shoot any more photos with the problematic card. Chances are good that most of your erased photos are still there. But as you take more photos, the older ones that are hidden get removed.

When you get back to your computer, put the memory card in a card reader and run data-recovery software. I've used DataRescue's \$29 PhotoRescue (www.datarescue.com), JoeSoft's \$30 Klix (⚡⚡⚡⚡; macworld.com/4781), and Disk Doctors' \$69 Photo Recovery (macworld.com/5225), and have found each to be effective at recovering photos and videos. All three applications offer demo versions that you can download for free and use to see which images are salvageable on your memory card. If you find what you're looking for, then you can buy the full version to actually save the photos to your computer.

Be Prepared

If you're mindful as you move your images from your memory card to your computer, and you back up your photos immediately, odds are good that you'll be able to recover from just about any type of memory mishap. And isn't that a beautiful picture?

Senior Contributor **Derrick Story**

teaches iPhoto on Lynda.com and runs a virtual camera club (thedigitalstory.com).

Nikon Camera Doubles as a Projector

By Kelly Turner

The beauty of a digital camera is that you can show off the results seconds after taking the shots. But sharing your photos with a large group means either being willing to let people pass your camera around or forcing everyone to crowd around the small LCD screen on the camera's back.

With the Coolpix S1000pj (www.nikonusa.com), Nikon offers a third option. This compact point-and-shoot camera can project your digital photos onto a nearby wall.

Simply turn the S1000pj toward a blank surface and press a button on the top of the camera to project a photo slide show or video. According to Nikon, the camera's projection distance ranges from 6 inches to just over 6 feet, with an image that is 40 inches (measured diagonally) at the farthest end of that scale. The S1000pj ships with a stand and a remote control that triggers the camera's shutter release as well as the built-in projector.

The 12-megapixel camera also features a 5X zoom (28–140mm equivalent), optical and electronic image stabilization, and an automatic scene-selection feature. The Smart Portrait feature softens skin tones and offers a warning if your subject blinks.

The S1000pj will sell for \$430.

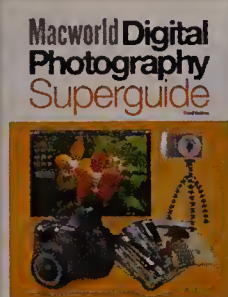


For All to See Nikon's Coolpix S1000pj can project photos on a nearby wall.

Be a Better Photographer

Get the latest advice on buying a new camera, taking great shots, and using iPhoto '09 to manage your

photo library in *Macworld's Digital Photography Superguide*. To order the downloadable PDF, the CD, or the full-color printed book, go to macworld.com/superguide.



SAMSUNG PUTS LCD SCREENS ON THE FRONT OF NEW CAMERAS

By Tim Moynihan

Two new Samsung point-and-shoot cameras will have a secondary LCD built into the front of the body. The TL225 (macworld.com/5226) and TL220 (macworld.com/5227) are the first cameras in Samsung's new DualView line. Each camera has a 1.5-inch LCD screen on its front that—based on the mode you've selected—offers a viewfinder for self portraits, an animated-cartoon scene to grab an infant's attention, or a count-down clock for the self-timer.

To activate the secondary LCD, you tap the front of the camera. During some brief hands-on time with the cameras, I found the front-panel screen sharp and bright, and it blended well into the camera's finish; the screen itself isn't even visible unless activated.

The TL225 features a roomy, 3.5-inch, ultrahigh-resolution touchscreen LCD on the back (the TL220 has a slightly smaller 3-inch touchscreen LCD). You

operate most of the cameras' controls via those touchscreens.

The controls include gesture-based and accelerometer-based controls for browsing, deleting, and rotating images on screen. And thanks to the accelerometers, you can access different camera functions by tilting the camera up, down, left, or right.

These aren't just gimmick-laden cameras, either, as they offer a nice list

of specs, including 27mm wide-angle lenses, dual optical and digital image stabilization, 12-megapixel CCD sensors, and 720p HD video recording in H.264 format at 30 frames per second.

The TL225 will sell for \$350, and the TL220 will go for \$300. The difference in price is due to the fact that the TL225 has a larger LCD, an aluminum back (the TL220 has a plastic back), and HDMI output via an additional accessory.



SNAPSHOT High-Speed Photography

Shots like this don't require impeccably fast reflexes. I captured this photo, in which a steel ball propelled from a slingshot smashes a lightbulb, using a shoe-mounted flash and a sound-activated trigger called a *sound sync*.

While most SLRs offer shutter speeds of up to 1/8,000 of a second, a standard shoe-mounted flash's light can last as little as 1/50,000 of a second. That burst of light is fast enough to capture even a speeding bullet.

I started by placing the lightbulb in a dark room and setting my shutter-speed mode to the bulb setting (typically only available on SLRs). This holds the

shutter open for as long as I keep the shutter release button pressed. I then recruited a colleague to fire the steel ball on my command.

The biggest challenge is firing the flash at the moment of impact. That's where the sound sync comes in. When something makes a noise, the sound sync trigger fires the flash. Then you release the shutter button.

You can buy a trigger from Universal Timer (www.universaltimer.com) or build your own high-speed photography setup. For instructions, go to Make (makezine.com).—JENNIFER WILLS

Share Your Shots

Submit your photo to our *Snapshot* series. Send the photo and a description of how you took it to digitalphoto@macworld.com. We'll feature our favorites on Macworld.com.

Moment of Impact This photo captures a steel ball's collision with a bulb.

Reviews

HARDWARE, SOFTWARE, AND ACCESSORIES
FOR MAKING AND MANAGING PHOTOGRAPHS

HARDWARE

Canon EOS Rebel T1i ▶

The EOS Rebel T1i is Canon's best Rebel yet. Offering



15-megapixel resolution, excellent low-light performance, and high-definition video recording, this SLR is good enough for many professional shooters. But at \$800 for the body and \$900 with a lens, the camera is affordable enough for casual photographers. The camera offers a compact but sturdy body, a 3-inch LCD, and top-notch image quality. In fact, its high ISO results are better than you'd have seen with the pro cameras from a couple of years ago (macworld.com/5228).

★★★★; with lens kit, \$900; body only, \$800; Canon, www.canon.com

Kodak Easyshare Z980

This 12-megapixel point-and-shoot camera offers an impressive 24X optical zoom (equivalent to 26–624mm) and speedy focusing. Slightly larger and heavier than some of the other cameras in its class, the Z980 feels sturdy and gets a lot of mileage out of two AA batteries. It has a secondary shutter release on the side for when you're taking vertical shots.

The Z980 scores below average in image quality, but it offers an option to shoot in Raw mode for better postproduction control of images (macworld.com/5229).

★★★; \$400; Kodak, www.kodak.com



SOFTWARE

PercepTool 1.5.5

If you want to take your images from flat to full of life in a hurry, the PercepTool plug-in for Adobe Photoshop CS3 and CS4 does the trick. The plug-in attempts to mimic your visual cortex's activities to make an image look the way your brain

thinks it should. It does this by altering the brightness, edges, and contrast of your images. To refine its controls, you'll need to use PercepTool as a script; for a one-click fix, use PercepTool as a plug-in (macworld.com/5163).

★★★★½; \$90; George DeWolfe, www.georgedewolfe.com

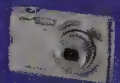
Top Products

YOUR GUIDE TO THE BEST HARDWARE WE'VE TESTED



DIGITAL CAMERAS SLR

PRODUCT	RATING	PRICE ^A	TYPE	FIND CODE ^B
D90 (pictured) www.nikon.com	★★★★	\$1139	12.3-megapixel	4966
EOS Rebel XSi www.canon.com	★★★★½	\$610	12-megapixel	3898
E-30 www.olympusamerica.com	★★★★½	\$999	12.3-megapixel	4453



DIGITAL CAMERAS Point-and-Shoot

PRODUCT	RATING	PRICE ^A	TYPE	FIND CODE ^B
Exilim Zoom EX-Z250 (pictured) www.casio.com	★★★★	\$243	9.1-megapixel	4256
PowerShot SD780 IS www.canon.com	★★★★	\$199	12.1-megapixel	5241



PRINTERS Inkjet

PRODUCT	RATING	PRICE ^A	TYPE	FIND CODE ^B
PictureMate Zoom PM 290 (pictured) www.epson.com	★★★★½	\$249	compact; photo	3102
Photosmart C6380 www.hp.com	★★★★½	\$152	inexpensive, multifunction	5242
Stylus Photo R1900 www.epson.com	★★★★½	\$539	professional photo quality	3649

^A All prices are the best current prices taken from a PriceGrabber survey of retailers at press time. ^B In a browser's address field, typing a find code after macworld.com/takes you to a product's review or overview.

PRODUCT WATCH

HARDWARE

Party-shot, from Sony (www.sony.com): Camera dock pans 360 degrees and uses face detection to automatically find and snap photos (\$150).

CL65 Digital Camera, from Samsung (www.samsung.com): 12-megapixel point-and-shoot camera offers Wi-Fi, GPS, Bluetooth, and DLNA connectivity (\$400).

SOFTWARE

iPhoto2Twitter, from Blue Crowbar Software (www.bluecrowbar.com): Plug-in makes it easy to tweet photos and videos directly from iPhoto (€5).

Flickery, from Eternal Storms (www.eternalstorms.at): Desktop Flickr uploader with an iPhoto-like interface has a good balance of features for novice and pro users (\$19).

LOGIC STUDIO VERSUS GARAGEBAND

Which one is best for you?

By Christopher Breen

With GarageBand (🍎🍎🍎🍎¹/₂; macworld.com/4409), you can record demos, play many of the included software instruments using a MIDI or USB controller, lay down a loop-based groove to inspire a new song, and thrash away on a guitar routed through the program's simulated amps and pedalboard effects. But GarageBand has its limits. And eventually some musicians will seek a more powerful tool. Apple would like that tool to be the recently released \$499 Logic Studio (🍎🍎🍎🍎¹/₂; macworld.com/5230) or the \$199 Logic Express 9. Logic Studio's two most important applications are Logic Pro 9—the suite's digital audio workstation—and MainStage 2, a live-performance tool for playing Logic's synthesized instruments and accompanying yourself onstage. Logic Studio also includes a variety of software synthesizers and effects plus all six of Apple's Jam Pack loop collections.

Interface

GarageBand users will find some familiar elements when they open a Logic project—tracks, media and loop browsers, and transport controls. The Sample Editor, Piano Roll, and Score tabs at the bottom of the Arrange window offer familiar views of waveforms, MIDI data, and notation. Beyond that, you're playing in the big leagues, with scads more options and a more professional interface. Instead of the basic controls in GarageBand's stripped-down Track Headers, you get full-blown channel strips complete with inserts and accurate faders. When viewing your MIDI data as notation, you



Arrange Window As with Logic Pro 8, many of the audio program's features in version 9 are available from the Arrange window.

get a real score editor. When you need to “fix it in the mix,” Logic provides umpteen ways to do it.

Guitar Center

This version of Logic Studio has a lot to offer guitar players. It has modeled amps and stompbox effects—termed Amp Designer and Pedalboard, respectively—which are similar but enhanced versions of GarageBand's Guitar Tracks. Amp Designer lets you create amp, speaker, and microphone setups to simulate the sound of classic and modern amps and cabinets. It includes 25 amps—think Marshall, Fender, Boogie, and Vox—25 matching cabinets (that need not match), and three virtual microphones for recording the sounds of your setup. Unlike with

GarageBand, you can pair any amp with any cabinet. So, for example, if you want to hear what a Marshall head sounds like pumped through a Bassman bottom, you're welcome to give it a go.

You manage the amplifier's controls—gain, bass, presence, and depth, for example—by twisting knobs and flipping switches. Unlike with GarageBand, you can choose the kind of microphone (condenser, dynamic, or ribbon) used to capture the sound of the amp and speaker, and change the mic's position.

Pedalboard is similar to GarageBand's stompboxes, except you get 30 stompboxes with effects such as overdrive, fuzz, and phaser—even a couple of Wah pedals. You can array them in any order, and split and mix them. Unlike with

GarageBand, you can use a MIDI or USB controller to kick in and control an effect while you're playing.

Live on Stage

MainStage 2 is intended for live performance. You can call up one of Logic's instrument sounds or create one yourself, and play and control its effects in real time from a MIDI or USB controller; you can also record your performance.

Playback is a new MainStage plug-in that plays back prerecorded material. The Loopback plug-in emulates a tape-loop echo—one where you press record and start playing, then wait for the loop to come around so you can layer more music on top of what you've already played. Logic's new Flex Time feature allows you to grab portions of a digital

audio track and drag them forward or back in time, as well as lengthen and shorten parts within a phrase to change the rhythmic feel. Flex Time lets you do this without forcing you to slice the audio or take complicated steps to compress or expand nearby audio. Just select the Flex Tool, choose the point where you want to push the audio forward or back, and drag the flex marker.

Backing Out of the Garage

GarageBand is a terrific tool for aspiring and working musicians. If you have a musical bent, it's iLife's secret jewel. But it's unquestionably limited. If those limitations are becoming clearer to you with each passing project, it may be time to consider the more powerful and complex Logic Studio.

FONT OF THE MONTH Zebra

We've all seen posters, logos, and headlines in which the text has a different fill color from its outline or shadow. To achieve this effect, you might think you'd have to use software to stroke and fill the display lettering with different colors, but this isn't always the case; sometimes the font includes several separate variations that you can stack and colorize. P22's Zebra font (p22.com) is a great example.

How does it work? Each part is actually a separate font, designed to match up perfectly if you stack two or more text containers on top of each other—some fonts even have three parts, allowing for tricolor text.

Here are a couple of ways to use Zebra. If your application lets you create multiple named layers, create and name a layer. Then, place a text container on that layer and type your text into it. Format the text using one of the fonts, and give it a color. When you're satisfied with how your text looks, duplicate that layer and change the font in the duplicate text box to one of Zebra's other variations, and give it a different color. That's it. You're done. If your application doesn't allow you to create named layers, just copy your text container and paste it on top of itself. If your application has a Paste In Place command (Edit ► Paste In Place), even better—you won't have to reposition the new container to align with the first one. As explained above, change the font in the second box and give it a different color. That's all there is to it.—JAY J. NELSON

Zebra Set
-t, B & C
Line Cut
Stencil
Wedge
123123123
Zebra
Zebra

Recording a Song on an iPhone

By John Brandon

I'm always looking for ways to get a song from my head into my computer. With Sonoma Wire Works FourTrack (🔗; macworld.com/5232), it's easy to compose and record a song, and export the audio to your Mac for editing. Track recording lets you lay down the basic instrumental parts



and then add vocals and other sounds.

Here's how to record your song:

1. Set your iPhone in Airplane mode.
2. Start FourTrack, and tap the Song Tools button. On the Song Tools screen, you can configure a metronome, which also lets you later sync drum loops at the same beats.
3. Name the song, and tap the down arrow to close Song Tools.
4. Tap the REC ARM button for track one and slide the Slide To Record button. Do the same for up to three additional tracks to add other sounds. Use the jog dial to scan through the song, or just tap the blue timer.
5. You have created your first song! Now, create additional tracks.
6. To record more tracks, you must combine ("bounce") tracks together. Tap Song Tools and use the bounce options.
7. Adjust pan settings for each track by moving the jog dial left or right.
8. When your song is done, go to Song Tools ► Song List ► Wi-Fi Sync at the bottom of the screen. On your Mac, start Safari and go to the IP address shown. On your iPhone, tap OK. Now your Mac is synced and you can download audio tracks from Safari and load them into GarageBand. (For a longer version of this story, see macworld.com/5233.)

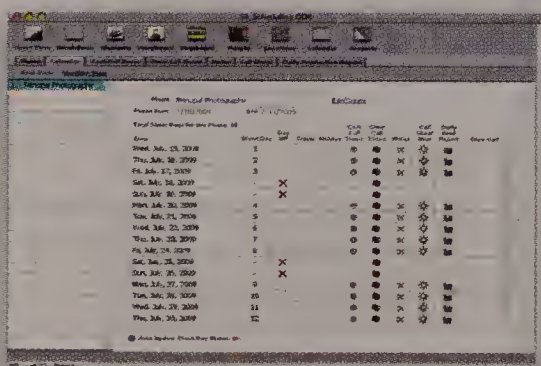
Reviews

HARDWARE, SOFTWARE, AND ACCESSORIES
FOR YOUR CREATIVE ENDEAVORS

SOFTWARE

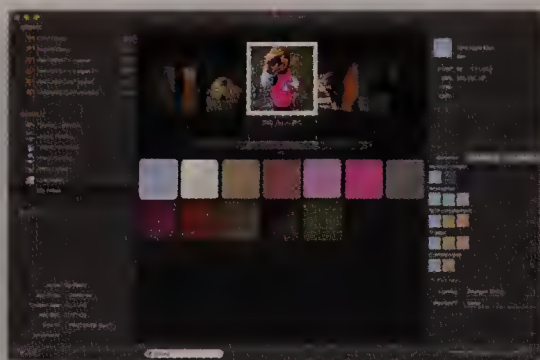
ColorMunki 1.1 ▶

The quest for consistent color rendition across devices (say, from your monitor to your printer) has been going on since the introduction of color to the desktop. Managing color is not as simple as specifying a pixel color and having your intent carried out across all devices. Controlling this mayhem requires both hardware and software to determine what colors your input and output devices are capable of creating—a process called *calibration*, or *profiling*. Once you know where you stand in color-space, you need tools for gauging color-matching accuracy and creating palettes. That's where X-Rite's ColorMunki 1.1 suite of tools enters the picture. The ColorMunki line is split into three products: Create, Design, and Photo. ColorMunki brings very good color management to the entry-level professional, advanced amateur, or enthusiast at a reasonable price. Both the hardware and the software are easy to use, and the digitizing features of the Design and Photo modules make ColorMunki an indispensable tool for users who need to match colors to paints, fabrics, and other physical objects (macworld.com/5235). **★★★★½**; Create, \$149; Design, \$499; Photo, \$499; X-Rite; www.xrite.com



Gorilla 4.5.5 (Pro Edition) △

If you've ever taken part in a professional film or video shoot, you know how complicated the logistics can get. Jungle Software's Gorilla 4.5.5 (Pro Edition) is a deep and comprehensive set of tools designed to help you plan and execute these complex logistics. It's targeted at



independent productions, from student projects to million-dollar features, as well as commercial and corporate video projects. Based on a runtime version of FileMaker Pro 6, it's a bit poky on today's Macs. And, regrettably, it's not networkable or multiuser friendly. Nonetheless, it provides comprehensive information-tracking capabilities and streamlines a lot of the grunt work (macworld.com/5236).

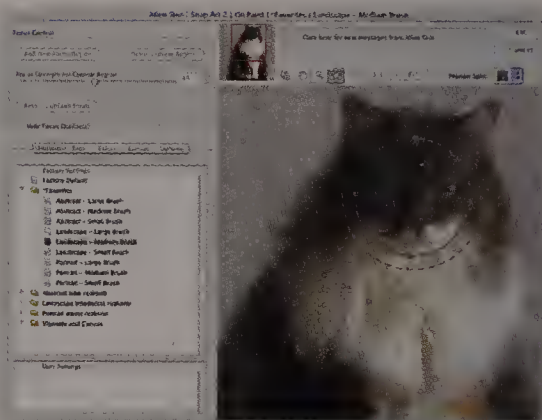
★★★★½; \$399; upgrade, \$49; Jungle Software; www.junglesoftware.com

Snap Art 2 ▶

Some photos would really look better as paintings. But for photographers who are not artistically inclined with a brush and palette,

there's Alien Skin Software's Snap Art 2. This Photoshop plug-in is a one-click wonder that instantly transforms a photo into a unique work of art. The program uses sophisticated algorithms to simulate a massive array of brush strokes. The new version sports more photo-realistic presets and focus regions that allow you to protect certain parts of your picture (faces, for instance) from extreme distortion. Photographers who yearn for a more painterly representation of their work can easily recruit Snap Art 2 for the task (macworld.com/5237).

★★★★½; \$199; Alien Skin Software; www.alienskin.com



Top Products YOUR GUIDE TO THE BEST HARDWARE WE'VE TESTED

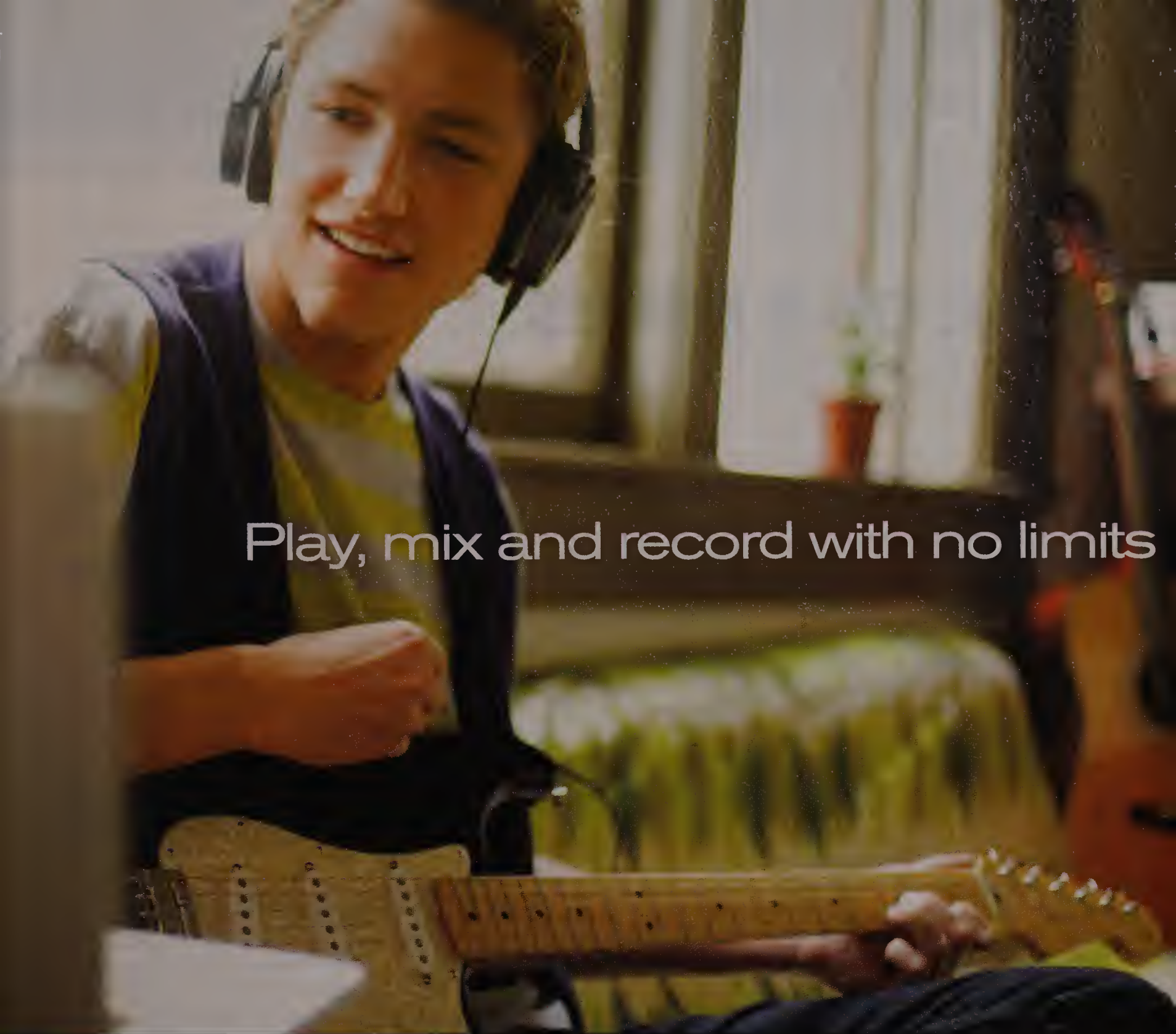
DVD BURNERS Desktop and Portable

PRODUCT	RATING	PRICE ^A	TYPE	FIND CODE ^B
MediaStation 8X External Blu-ray Writer (pictured) www.buffalotech.com	★★★★	\$350	Blu-ray	5263
d2 DVD±RW w/LightScribe www.lacie.com	★★★★	\$85	desktop	3900

CAMCORDERS High Definition

PRODUCT	RATING	PRICE ^A	TYPE	FIND CODE ^B
Flip UltraHD (pictured) www.theflip.com	★★★★½	\$185	mini camcorder	5057
Vixia HG21 www.canon.com	★★★★	\$744	120GB HD	5182

^AAll prices are the best current prices taken from a PriceGrabber survey of retailers at press time. ^BIn a browser's address field, typing a find code after macworld.com/takes you to a product's review or overview.



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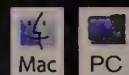
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MAC OS X HINTS

The insider tips you won't get from Apple

By Rob Griffiths

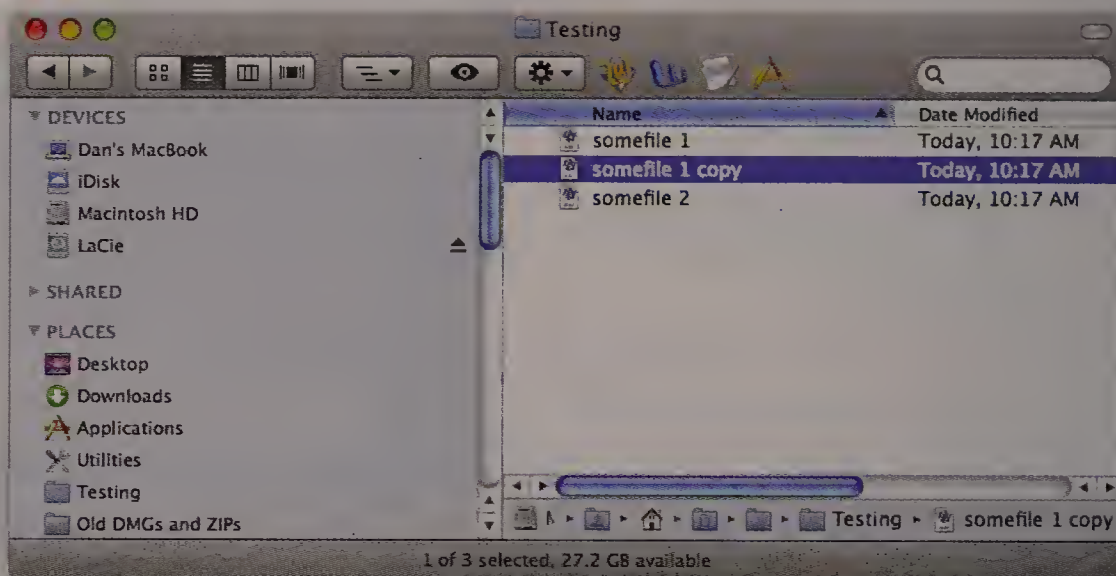
Sequentially Name Copied Files

There are many ways to duplicate files in the Finder—copy and paste (⌘-C, ⌘-V), Control-click and then Duplicate (⌘-D), and Option-drag among them. In OS X 10.5, the name of the copied file changes depending on how you copy it.

If you copy-and-paste or duplicate a file, the Finder will append the word *copy* to the end of the filename. If the file's name already ends in *copy*, the Finder will append a number to the name, to differentiate it from the other copied file.

But if you copy the file by Option-dragging it, the Finder will name the duplicate differently, depending on the original's name. If the original's name ends with a word, or a word-number combo (such as *somefile* or *somefile5*), the Finder will append a number to it (*somefile5 1*). But if you Option-drag a file whose name ends with a number set apart from the rest of the file's name (*somefile 5*), the Finder will increase that number by one (*somefile 5* will become *somefile 6*).

You can take advantage of this feature when you want to duplicate a single file or many files and increment their filenames. Just make sure they have a



Copied Names Copy and paste a file with a space and a number at the end of its name, and the Finder adds the word *copy*; Option-drag it, and the Finder increments the number.

stand-alone number at the end of their names and then use Option-drag.

Rename Open Files

If you want to rename a file you're working on, you can select File ▶ Save As to create a new file with a new name. Or you can close the file, switch to the Finder, rename the file, and then reopen it. Both methods work, but in many programs you can rename the file while it's still open.

Say you're editing a text file in TextEdit. There are two ways to rename it while it's still open. First, you can switch to the Finder and rename the file. Or, more simply, you can ⌘-click (or, in Mac OS X 10.5, Control-click) on the filename in TextEdit's window title bar, select the file's folder from the drop-down menu, and, when that folder opens in the Finder, rename the file. However you do it, when you switch back to TextEdit, you should see the new filename in the title bar.

Open Safari Links in New Tabs

Some Web links insist on opening new browser windows. Firefox lets you override this behavior by specifying (in the Tabs preference pane) that you'd rather open such links in new tabs.

Unfortunately, Safari doesn't have such a preference setting. You could make Safari open these links in new tabs by ⌘-clicking on them. But if you'd rather not have to hold down the ⌘ key all the time, you can force Safari to open those links in new tabs by editing a hidden preference setting.

To do so, quit Safari, open Terminal (/Applications/Utilities), and enter this command, followed by Return:

```
defaults write com.apple.Safari TargetedClicksCreateTabs -bool true
```

When you relaunch Safari, links that would normally open new windows should open in new foreground tabs instead. (To open tabs in the background, use the aforementioned ⌘-click solution.)

Have a Hint to Share?

Go to MacOSXHints.com to submit it. This column was based on tips from Eric Lubin, Frederico Russo, Dennis Stevense, and any-

mous contributors. Each month, the author of our favorite tip receives the *Help Desk* mug.



To disable this hidden setting, quit Safari again, enter the following command in Terminal, and then press Return again:

```
defaults delete com.apple.Safari TargetedClicksCreateTabs
```

Get Safari's Debug Menu Back

The Debug menu seems to have vanished in Safari 4. But it's not actually gone; only the method for revealing it has changed.

First quit Safari and open Terminal (/Applications/Utilities). Then enter the following, followed by Return:

```
defaults write com.apple.Safari IncludeInternalDebugMenu 1
```

When you relaunch Safari, you'll see the Debug menu to the right of the Help menu. If you tire of having the Debug menu up there, quit Safari and then repeat the above command, but replace the **1** with a **0**. Press Return when you're done, and the Debug menu will be gone.

Add the Weather to iCal

For an up-to-date weather forecast on your Mac and iPhone, you can easily subscribe to a weather calendar in iCal.

First, go to Weather Underground (wunderground.com) in your browser. In the search box, enter the name or zip code of the city for which you want the weather and then click Go. Once the results appear, Control-click on the iCAL icon near the top right of the page and select Copy Link (or Copy Link Location in Firefox) from the pop-up menu.

Switch to iCal and select Calendar ► Subscribe. Press ⌘-V to paste the link you just copied, and then click Subscribe. In the dialog box that appears, edit the Name field and Description as you like. Click on the Auto-refresh pull-down menu and select the interval you want.

If you want these forecasts to appear on your iPhone too, connect your phone to your Mac, select your phone under Devices in iTunes' sidebar, and then click

WHAT'S ONLINE

Speed Up Photo-Heavy

Pages Files Banish the spinning beach ball by disabling page thumbnails (macworld.com/5282).

See RSS Authors in Mail

Uncover a hidden column to see who wrote an article (macworld.com/5283).

Better Handout Printing from

Keynote Work around Keynote's Print dialog box limitations (macworld.com/5284).



on the Info tab. In the Calendars section, select Sync iCal Calendars and then Selected Calendars. Click the checkbox next to the subscribed weather calendar to sync it to your phone.

Assign Places without GPS Camera

iPhoto '09's Places feature lets you organize and view photos by location. If your camera has built-in GPS, it's simple to assign a location to a photo. But if you don't have a GPS-enabled camera, there's a workaround that relies on the iPhone 3G or iPhone 3GS.

When you're about to start shooting in a new location, first take one snapshot with your iPhone; it will automatically tag that photo with its GPS coordinates. Then you can snap away with your digital camera. Repeat this process whenever you move to a new location.

When you get back home, import the images from both the iPhone and your digital camera into iPhoto '09. Select the image you took with your iPhone, and click on the small Info icon in its lower right corner. There, confirm that the location for the photo is correct. Assuming it is, click Done and then press ⌘-C to copy the photo.

Now select all the pictures you took with your digital camera at that same location. Control-click on one of those photos, and choose Paste Location from the pop-up menu. The location info from the iPhone image will be assigned to all of the selected photos. Repeat this process for each location at which you snapped photos.



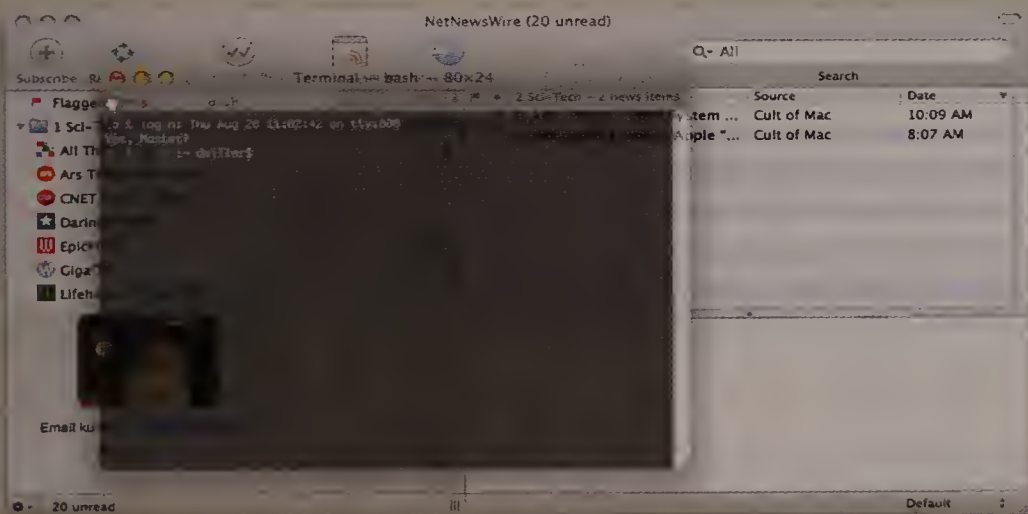
POWER TIP OF THE MONTH

The See-Through Terminal

If you spend a lot of time in Terminal, you may sometimes want to see what's behind the Terminal window. You can move it out of the way, minimize it, resize it, or use Exposé. Or you can make the window temporarily translucent.

To do so, you must be running OS X 10.5 (or later), have Terminal's tab bar visible (View ► Show Tab Bar), and be using only one tab. Click and hold on the tab, and then pull it down. Doing so turns the window nearly transparent. (If you had multiple tabs open, clicking and holding on a tab would turn that tab into its own window.)

The window will remain transparent for as long as you hold down the mouse button. Once you're done viewing whatever it is you wanted to see, release the mouse button.



Transparent Terminal To see what's behind a Terminal window, click and hold on a tab and then drag it downward; doing so will make the window temporarily translucent.

MAC 911

Solutions to your most vexing Mac problems

By Christopher Breen

Disabling Safari 4's Image Cache

Q: I've just noticed that Safari 4 has an image cache that stores a JPEG and PNG version of every Web page I visit. Is there a way to turn this feature off?

Martin Pace

A: If you use Safari 4's Top Sites feature—the one that displays sites you visit on an image wall—you need these cached images because they're displayed on this wall. If, like me, you never use this feature, you're welcome to dispose of the images and use the technique I'm about to outline to prevent them from accumulating in the future.

To dispose of the images, choose Safari ► Reset Safari and, in the window that appears, select only the Remove All Webpage Preview Images option and click the Reset button (see “Off the Wall”). To prevent Safari from gathering more of these images in the future, navigate to *youruserfolder/Library/Caches/com.apple.Safari* and select the Webpage Previews folder. Press ⌘-I. In the resulting Info window, enable the Locked option. With the folder locked, Safari will find it impossible to save images to it.

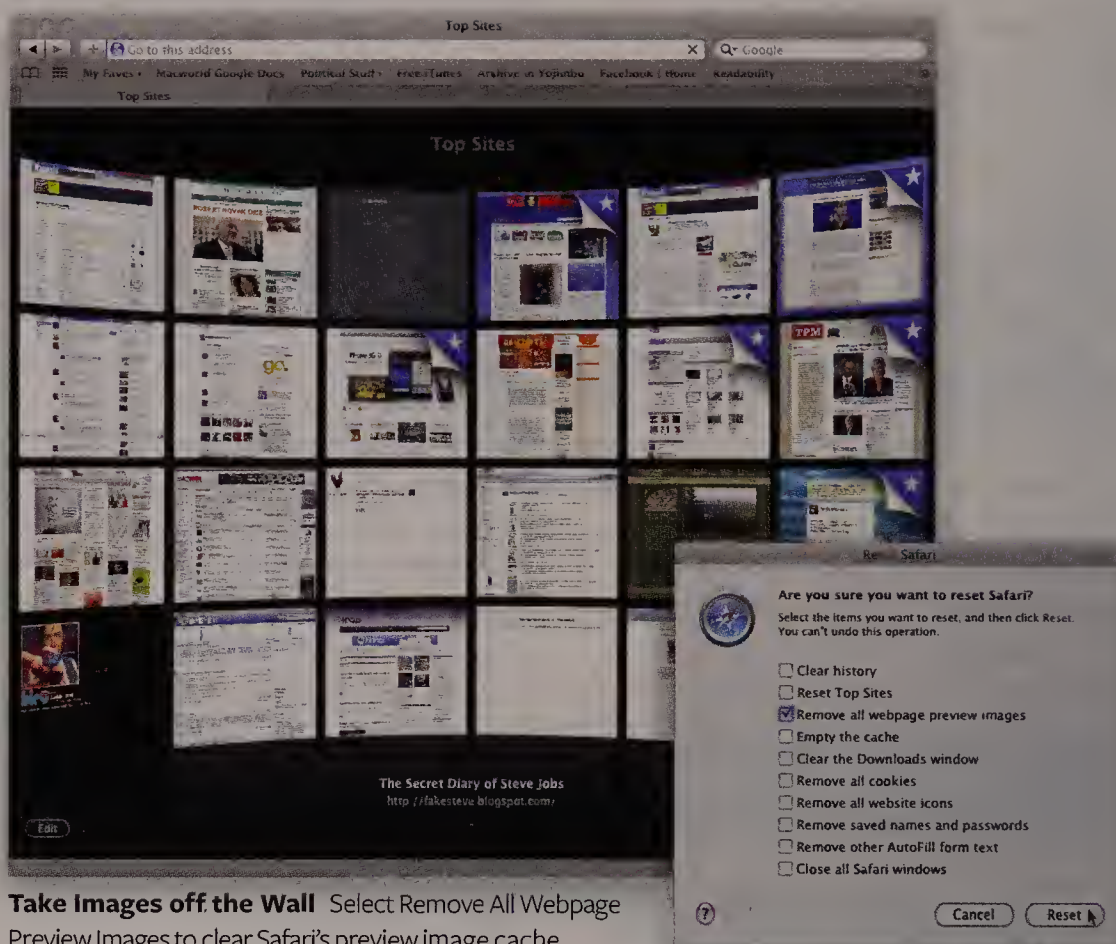
Put Spare Hard Drives to Work

Q: I have a Mac Pro that I loaded with four 250GB SATA drives. The 1TB of storage filled faster than I expected, and so I've since replaced some of them with 500GB drives. Things are getting tight again, and now that prices have come



Have a Problem?

Go to the Mac 911 forum (macworld.com/2467) for help with your misbehaving Mac or applications.



Take Images off the Wall Select Remove All Webpage Preview Images to clear Safari's preview image cache.

down, I'm thinking of 1TB drives. What should I do with all the old SATA drives?

Bill Robertson

A: It's silly to toss out these perfectly serviceable older drives. So allow me to suggest three ways to put them to use: Drobo, Voyager Q or Voyager S2, or external enclosures.

Data Robotics' Drobo (ⓂⓂⓂⓂ; macworld.com/3931) is a RAID enclosure that supports up to four SATA drives of any capacity. Available for around \$350, the Drobo works over a USB 2.0 or FireWire 800 connection. Note that the Drobo doesn't provide the accumulated capacity of each drive because it's a redundant system. It stores two copies of your data. So, for example, if you were to shove four 1TB drives into it, you'd realize only about 2.7TB of storage.

If you're seeking a way to simply jack in a spare SATA drive, take a look at

NewerTech's Voyager Q or Voyager S2 (macworld.com/5224). Priced at \$95 and \$50, respectively, these hard-drive “enclosures” look and behave like toasters. Just connect one to your Mac (the Q supports FireWire 400 and 800, USB 2.0, and eSATA connections, while the S2 supports USB 2.0 and eSATA), jam a 2.5- or 3.5-inch SATA drive into the slot, and watch as the drive mounts on your Mac. When you're done with that drive, drag its icon to the Trash, and then push down the Voyager's lever to pop out the drive, just as you'd pop out a slice of toast.

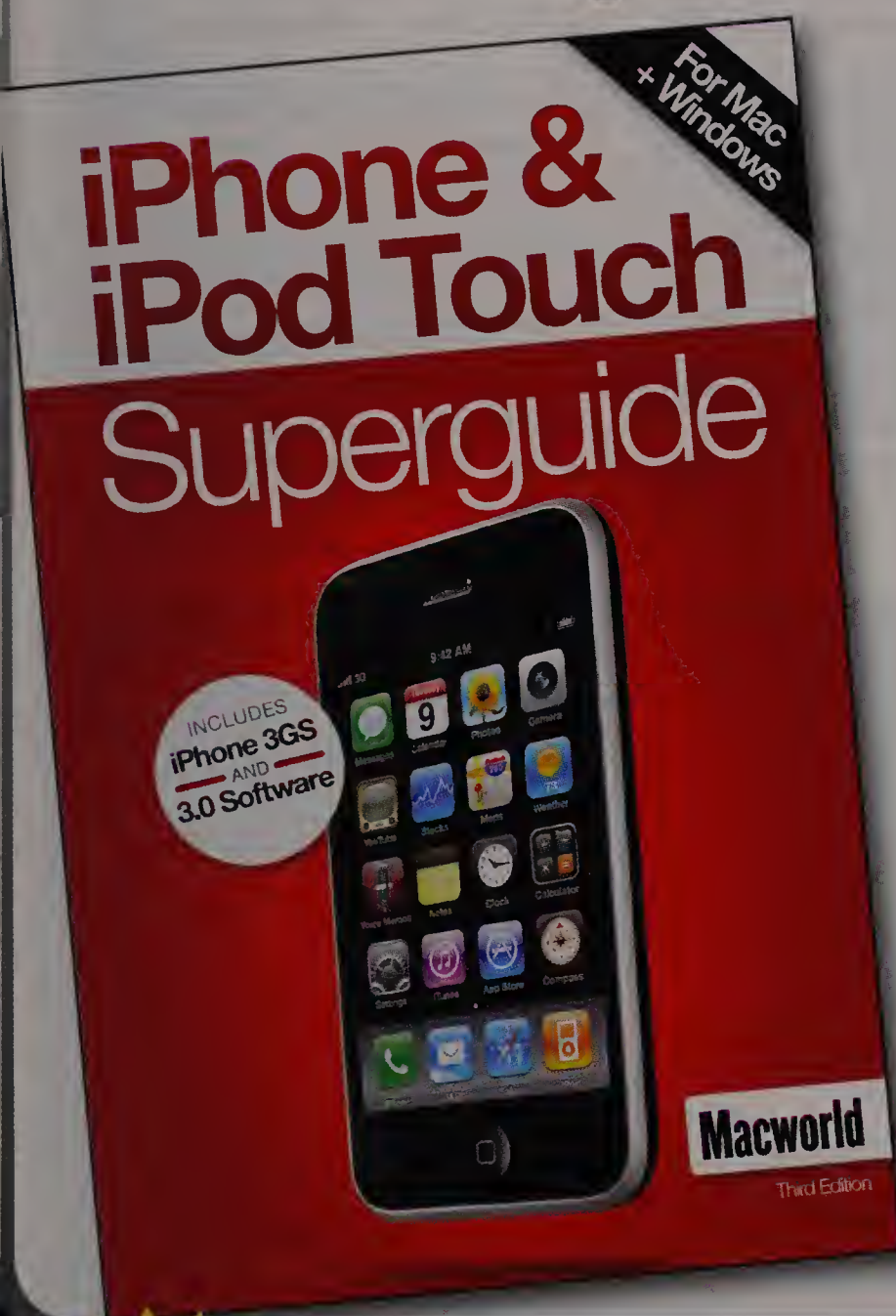
If you desire a more permanent solution, purchase a drive enclosure from an outfit such as OWC (www.macsales.com) or NewEgg (www.newegg.com). These come in a variety of flavors—USB 2.0, eSATA, FireWire 400, and FireWire 800 (and often a combination of them)—and can be had for as little as \$40.

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iCal and Shifting Time Zones

Q: While traveling recently, I stumbled upon an iCal feature that took me by surprise, and not in a good way. Changing the computer's time zone (in the Date & Time system preference) changes the time stamp of every item—past and future—in my iCal calendar. Is there a way to set iCal items so that the current time zone setting leaves past events unchanged?

Eric Brown

A: Launch iCal, choose Preferences from the iCal menu, click the Advanced tab, and enable the Turn On Time Zone Support option. When you do this, a pop-up menu appears in the iCal window's upper right corner. As you might expect, this pop-up menu displays the time zone configured within the Date & Time system preference.

Whenever you change time zones within Date & Time, your events will shift, just as you've observed. To shift them to



False Alert about a Security Breach When you encounter a Web site that claims to have detected viruses on your Mac, you may see a Windows Security Alert pop-up window. In that case, you know you're being hustled—those alerts don't apply to the Mac platform.

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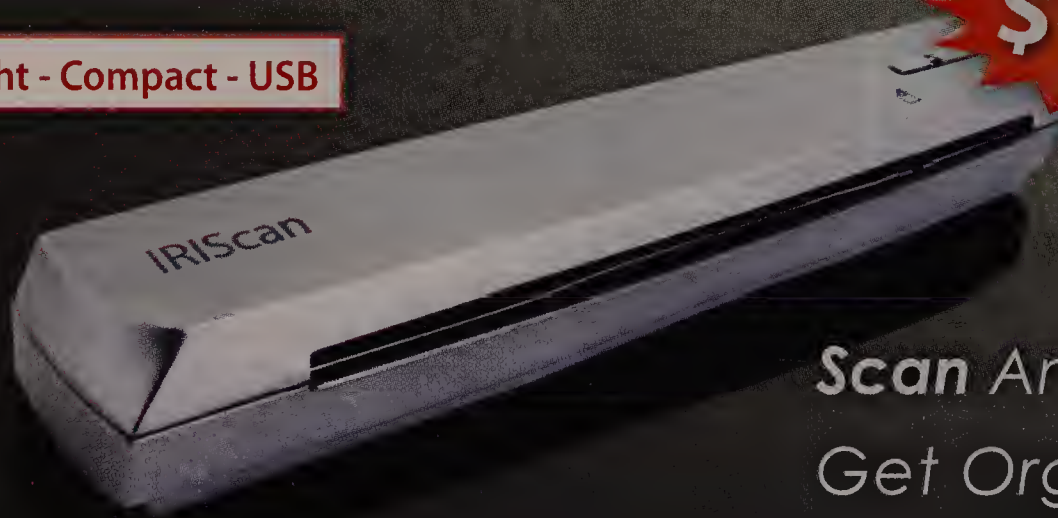
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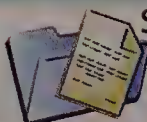


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Convert piles of photos into shared digital memories.

display in a different time zone, simply click this pop-up menu and choose the time zone you'd like. If an appropriate one doesn't appear, select Other and, in the sheet that appears, choose the time zone you want and click OK.

If you would like two parts of a journey to appear in their respective local times, select each event, press ⌘-E to cause the event edit window to appear, and choose the time zone you desire from the Time Zone pop-up menu within the edit window (it appears just above the Repeat entry). Alternatively, you can choose Floating from this pop-up menu and enter any time you like for these events. The Time Zone setting you've selected in the Date & Time system preference will then have no effect on them.

No, Your Mac's Not Infected

Q: When I used Yahoo to search for something on the Web, I was sent immediately to a Web site that indicated my Mac is contaminated

with viruses. I don't know what to do! Is my Mac indeed infected?

Via the Internet

A: First, relax. Your Mac wasn't invaded, infected, compromised, co-opted, or conquered. If you'd clicked through a few of those dire pop-up warnings, you might have been amused to see a phony Windows Security Alert appear on a Macintosh (see "False Alert about a Security Breach"). What you've encountered is termed "scareware"—a scam that attempts to frighten people confronted with these pages into downloading a hunk of software that will allegedly deal with the problem.

The chain of events goes like this: the scammers hijack a perfectly legitimate URL, which then redirects you to the scareware page. That page is designed in such a way that several dialog boxes pop up, warning you that your computer is infected. Click the

Cancel button and you'll just get more warnings and an interface that makes it appear your computer is being scanned.

If you fall for the trick and click the buttons necessary to download the offered antivirus software, you'll pay for a product that is likely a hunk of malware (and I hate to think what will happen to the credit card information you provided). This malware is bad for Windows PCs, but it has no effect on Macs.

Regrettably, these pages are sometimes difficult to dismiss because the constant pop-up warnings prevent you from leaving. Clicking OK may get rid of the pop-ups so that you can close the window or tab (and no, doing so won't automatically download the software to your Mac), but I faced a similar situation with my wife's Mac (and she was just as concerned as you are). In that case, I had to force-quit Safari (by pressing ⌘-Option-Escape) to get away from the scareware page.



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Cataloging Mail by Date

Q: In Microsoft Entourage, you have the option to view your mail by Today, Yesterday, Last Week, Last Month, and This Year. Is there a way to do this in Mail?

Kent Pletcher

A: You can create something similar to Entourage's Saved Searches in Apple's Mail by putting Smart Mailboxes to good use. Try the following technique. Open Mail and choose Mailbox ▶ New Smart Mailbox. Configure the resulting Smart Mailbox window to read like this:

**Contains Messages That Match
All Of The Following Conditions:
Date Received Is Today
Message Type Is Mail**

Give it a name like "Today" and click OK. Any e-mail messages you receive that very day will appear in this smart mailbox. Because smart mailboxes are dynamic, when today becomes yesterday, these messages will be removed from this mailbox—and moved to Yesterday, if you've created such a smart mailbox. You can create additional smart mailboxes that include conditions such as Yesterday, This Week, and Last Week.

Securely Wipe Your Hard Drive

Q: I saw an ad for software that would erase hard disks with the method approved by the U.S. government: by writing 0s and 1s on the drive in several passes. Does such software actually exist?

Jim Bradley

A: It does, and you'll be happy to know that it's free and likely already on your Mac if you're running Tiger or Leopard.

To begin the process of wiping your drive, launch Disk Utility (/Applications/Utilities) and select the drive you want to erase in the pane on the left side of the Disk Utility window. Click the Erase tab and then click the Security Options button below. In the sheet that appears, you'll see four options—Don't Erase Data, Zero Out Data, 7-Pass Erase, and 35-Pass Erase.

The Don't Erase Data option—as its name implies—doesn't erase any data. Rather, it wipes out the directory that tells your Mac where your data is. Any number of third-party utilities could scour your drive and recover your data after you've employed this option. So that's not secure at all.

Zero Out Data writes zeros over your drive one time. It's not up to government standards because "ghost" images of your data can remain in some places, but recovering data from this drive would be a chore.

7-Pass Erase meets that U.S. Department of Defense 5220-22 M standard about which you've heard so many good things. It writes over your data seven times.

And for the truly paranoid...er, *concerned*, there's the 35-Pass Erase option, which, as the name hints, writes junk over your drive 35 times. If you want your data super-mega-ultra-really gone, this is the one to use.

Note that the 7-Pass Erase option takes seven times longer to overwrite your data than does the Zero Out Data option. Likewise, the 35-Pass Erase option takes 35 times as long.

If even these options leave you with a slight case of the jimjams, allow me to propose the Multi-Pass Sledgehammer option. If you need your data to be totally unrecoverable and are willing to sacrifice a hard drive to make that happen, extract the drive from your Mac, take it out back, strap on the safety goggles, and beat the living hell out of it.

MAC 101

Create a Hierarchical Dock View

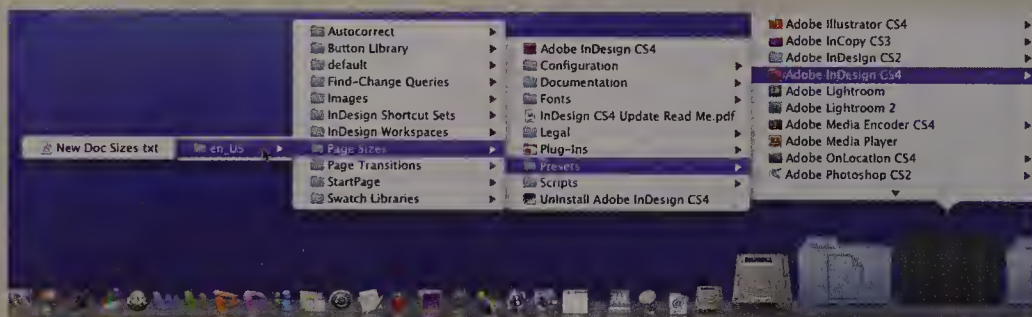
Q: How can I make the spring-loaded Dock stack I have for my Application folder hierarchical?

Dennis Vogel

A: What you're looking for is the Dock's nested folder hierarchy from the good old days, which briefly disappeared when Leopard first appeared. It's back now and works this way:

Click and hold on the Applications folder in the Dock and make sure that the List option is selected (check out "See the Hierarchy"). That should produce the behavior you're after.

Regrettably, whenever you drag a folder or volume to the Dock it will do things the old way by default. Folders or volumes that have just a few items will display as a fan when clicked on. Those with lots of items will display in a grid view. To see the hierarchical view that you (and I) prefer, you must choose these folder and list settings for each folder or volume you drag into the Dock.



See the Hierarchy Choosing the List option from a docked folder's contextual menu gives you a hierarchical view of the folder's contents.

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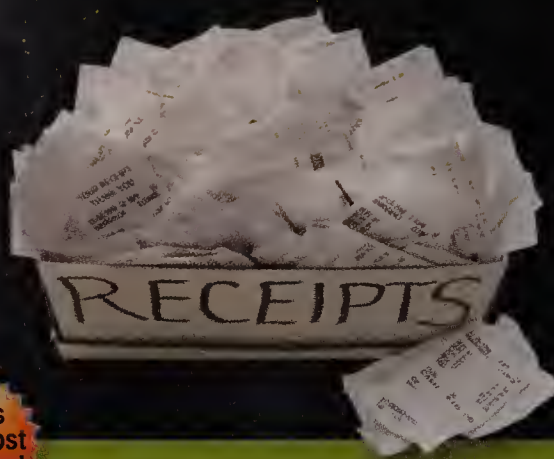


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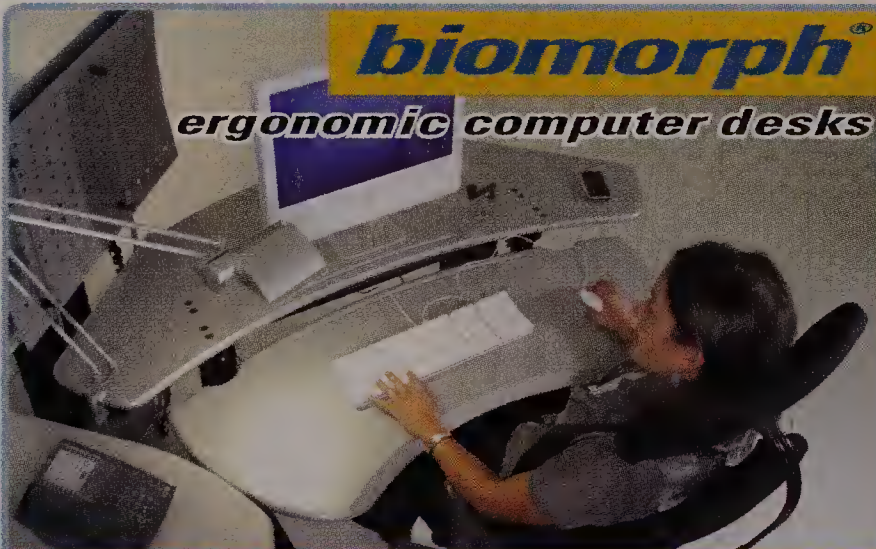
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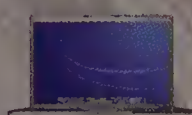
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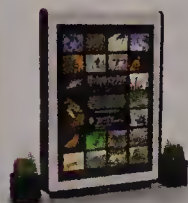
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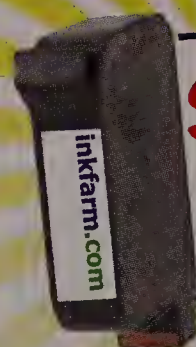
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Hot Stuff

WHAT WE'RE RAVING ABOUT THIS MONTH

Check Off 4

We're all busy people. I know this, and Mac developers clearly know it as well. How else can one explain the veritable cornucopia of task-managing apps for our platform of choice? While many of them are either designed for use with some larger workflow system or laden

down with excessive bells and whistles, Second Gear's Check Off 4 is simple and effective. The application sits in your Mac's menu bar (as a checkmark icon, of course), just waiting for you to add a task. You can include a note with your task, organize your

list using folders, and color-code both tasks and folders. Version 4 sports a shiny new interface as well as the ability to purge all your completed tasks with the click of a button. A single-user license costs \$13 and a family pack (for up to five computers) can be yours for \$20 (www.secondgearsoftware.com).

—SCOTT MCNULTY

BackPack

External hard drives let you add storage relatively inexpensively, but they also add to your desktop clutter. If you have an aluminum iMac or an Apple Display, Twelve South's \$30 BackPack can help reduce that disarray by hiding gear behind the display. The BackPack is a 7-by-4-inch, heavy-gauge steel shelf that mounts to the back of your iMac or display, providing a sturdy platform on which to stash hard drives or other peripherals that weigh 5 pounds or less. (Twelve South claims the BackPack can actually hold a Mac mini, sitting on its side.) You can adjust the height for items of different sizes, or even attach two BackPacks for more storage space (www.twelvesouth.com).—DAN FRAKES



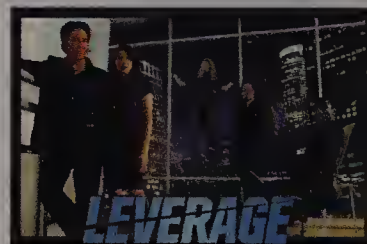
Gruml

Currently in beta, Gruml is a native Mac client for the Web-based Google Reader. It sports an intuitive news-reading interface and supports many of the service's appealing features, letting you flag, "like," and share posts (and add notes and tags), and read headlines that friends share with you. Gruml also keeps in constant contact with Google Reader: Read an article, mark it as shared, or add a note, and Gruml immediately reports that activity back to the mother ship. Unfortunately, Gruml doesn't yet act as an offline client, so you'll need an Internet connection to use it (www.grumlapp.com).—DAVID CHARTIER



Leverage

TNT's *Leverage* follows a modern-day band of high-tech, Robin Hood-style thieves who help ordinary folks get payback against the greedy people who take advantage of them. Mastermind Nate (Timothy Hutton), grifter Sophie (Gina Bellman), martial arts expert Eliot (Christian Kane), hacker Hardison (Aldis Hodge), and master thief Parker (Beth Riesgraf) take on villains including shady hedge-fund managers and pyramid schemers. And who doesn't want to see rich slimeballs getting their due? On iTunes, each HD episode is \$3 and each SD one is \$2 (tnt.tv/series/leverage).—DAN MOREN



iPhone PLAYING CARDS

Last year I got a kick out of Meninos's iPhone-icon coasters. The company, which makes a full line of Mac-, iPhone-, and computing-focused household items, has followed up with a \$25 set of iPhone-inspired playing cards. Made of PVC plastic, each washable 2.2-by-3.5-inch card assumes an iPhone's shape and look, complete with shiny bezel. The "screen" of each card displays the face of a playing card in a standard 52-card deck. (A humorous touch: The face cards—jack, queen, and king—also show the iPhone's Decline and Answer buttons for incoming calls.) Now you'll really want to know what's on the iPhone your friend is holding (www.meninos.us).—DAN FRAKES



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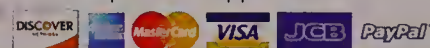
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